

BHARATHIAR UNIVERSITY : COIMBATORE-641 046

M.B.A – Telecom Management

(For the CPOP students admitted during the academic year 2010-11 & onwards)

SCHEME OF EXAMINATIONS – CBCS Pattern

Course Title	Ins.hrs / week	Examinations				Credits
		Dur.Hrs	CIA	Marks	Total	
SEMESTER –I						
1.1.Management Principles and Practice	5	3	25	75	100	4
1.2.Organizational Behaviors	5	3	25	75	100	4
1.3.Managerial Economics	4	3	25	75	100	4
1.4.Financial and Management Accounting	5	3	25	75	100	4
1.5.Quantitative Methods for Management	5	3	25	75	100	4
1.6.Corporate Communication	4	3	25	75	100	4
1.7.Computer Applications in Management using SAP*	2	-	-	-	-	-
SEMESTER –II						
2.1. Operations Management	5	3	25	75	100	4
2.2. Marketing Management	4	3	25	75	100	4
2.3. Financial Management	5	3	25	75	100	4
2.4. Human Resource Management	4	3	25	75	100	4
2.5. Quantitative Techniques	5	3	25	75	100	4
2.6. Research Methods for Management	5	3	25	75	100	4
2.7. Computer Applications in Management using SAP* - Practical	2	3	40	60	100	4
SMESTER – III						
3.1. International Business	5	3	25	75	100	4
3.2. Management Information System	5	3	25	75	100	4
3.3. Telecommunication Management Essentials	5	3	25	75	100	4
3.4. Telecommunication Network Fundamentals	5	3	25	75	100	4
3.5. Mobile -COMMERCE (M- commerce)	5	3	25	75	100	4
3.6. Telecom Industry in India	5	3	25	75	100	4
3.7. Summer Placement Project Report & Viva-Voce	-	-	20	80	100	4
SEMESTER – IV						
4.1. Strategic Management : Indian Global Context	6	3	25	75	100	4
4.2. Telecom Standards, Policies & Regulations	6	3	25	75	100	4
4.3. Telecom Business Management	6	3	25	75	100	4
4.4. Telco Revenue Assurance	6	3	25	75	100	4
4.5. Telco Churn Management	6	3	25	75	100	4
TOTAL	-	-	-	-	2500	100

* The Course will be taught during I and II Semesters.

Electives for III Semester

Telecom Management

- 3.3 Telecommunication Management Essentials
- 3.4 Telecommunication Network Fundamentals
- 3.5 Mobile -COMMERCE (M- commerce)
- 3.6 Telecom Industry in India

Electives for IV Semester

Telecom Management

- 4.2 Telecom Standards, Policies & Regulations
- 4.3 Telecom Business Management
- 4.4 Telecom Revenue Assurance
- 4.5 Telco Churn Management

1.1 MANAGEMENT PRINCIPLES AND PRACTICE

Unit I

Management : Science, Theory and Practice - The Evolution of Management Thought and the Patterns of Management Analysis - Management and Society : The External Environment, Social Responsibility and Ethics - Global and Comparative Management - The Basis of Global Management.

Unit II

The Nature and Purpose of Planning - Objectives - Strategies, Policies and Planning Premises - Decision Making - Global Planning.

Unit III

The Nature of Organizing and Entrepreneurship - Organizational Structure : Departmentation - Line/Staff Authority and Decentralization - Effective Organizing and Organizational Culture - Global Organizing.

Unit IV

Co-ordination functions in Organisation - Human Factors and Motivation - Leadership - Committees and group Decision Making - Communication - Global Leading.

Unit V

The System and Process of Controlling - Control Techniques and Information Technology - Productivity and Operations Management - Overall Control and toward the Future through Preventive Control - Global Controlling and Global Challenges.

References :

1. Koontz & Weirich, Essentials of Management, Tata McGraw Hill.
2. VSP Rao, V Hari Krishna – Management: Text and Cases, Excel Books, I Edition, 2004
3. Stoner & Wankai, Management, PHI.
4. Robert Krcitner, Management, ATTBS.
5. Weirich & Koontz, Management - A Global perspective, McGraw Hill.
6. Helliregarl, Management, Thomson Learning, 2002.
7. Robbins.S.P., Fundamentals of Management, Pearson, 2003.

1.2 ORGANISATIONAL BEHAVIOUR

Unit I

Organisational Behaviour : History - evaluation, Challenges & opportunities, contributing disciplines, management functions and relevance to Organisation Behaviour.

Personality - Determinants, structure, behaviour, assessment, psycho-analytical social learning, job-fit, trait theories.

Unit II

Emotions and Emotional Intelligence as a managerial tool. Implications of EI on managers and their performance. Attitudes - relationship with behaviour, sources, types, consistency, work attitudes, values - importance, sources, types, ethics and types of management ethics.

Perception - Process, Selection, Organisation Errors, Managerial implications of perception.

Learning - classical, operant and social cognitive approaches. Implications of learning on managerial performance.

Unit III

Stress - Nature, sources, Effects, influence of personality, managing stress.
Conflict - Management, Levels, Sources, bases, conflict resolution strategies, negotiation.
Foundations of group behaviour : linking teams and groups, Stages of development Influences on team effectiveness, team decision making. Issues in Managing teams.

Unit IV

Organisational change - Managing planned change. Resistance to change - Approaches to managing organisational change - Organisational Development - values - interventions, change management.
Organisational politics - Political behaviour in organisation, Impression management, Self monitoring. Organisational culture - Dynamics, role and types of culture and corporate culture, ethical issues in organisational culture, creating and sustaining culture.

Unit V

Organisational Behaviour responses to Global and Cultural diversity, challenges at international level, Homogeneity and heterogeneity of National cultures, Differences between countries, The Challenges of work force diversity and managing diversity Cases.

References :

1. Robbins.S. Organisational Behaviour, X edn., Prentice-Hall, India.
2. Hellinegal Slocum, Woodman, Organisational Behaviour, IX edn., Thomson learning.
3. Umasekaran, Organisational Behaviour, Tata McGraw Hill.
4. Robbins S.P., Concepts contrivances and applications, Prentice Hall.
5. Umasekaran, Organisational Behaviour.
6. Helliregal.et.al, Organisational Behaviour, Thomson Learning.
7. McShane & Glinow, Organisational Behaviour, Tata McGraw Hill.
8. Harris & Hartman, Organisational Behaviour, Jaico, 2003.

1.3 MANAGERIAL ECONOMICS

UNIT I : Managerial Economics - meaning, nature and scope - Managerial Economics and business decision making - Role of Managerial Economist - Fundamental concepts of Managerial Economics.

Demand Analysis - meaning, determinants and types of demand - Elasticity of demand.

UNIT II : Supply meaning and determinants - production decisions - production functions - Isoquants, Expansion path - Cobb-Douglas function, Cost concepts - cost - output relationship - Economies and diseconomies of scale – cost functions.

UNIT III : Market structure - characteristics - Pricing and output decisions - methods of pricing - differential pricing - Government intervention and pricing.

UNIT IV: Profit - Meaning and nature - Profit policies - Profit planning and forecasting - Cost volume profit analysis - Investment analysis.

UNIT V : National Income - Business cycle - inflation and deflation - balance of payments - Monetary and Fiscal Policies

References :

1. Joel Dean - Managerial Economics, Prentice Hall/Pearson.
2. Rangarajan - Principles of Macro Economics, Tata McGraw Hill.
3. Atmanand, Managerial Economics, Excel, 2001.
4. Athmanand.R., Managerial Economics, Excel, 2002, New Delhi.
5. Mankar.V.G., Business Economics, Macmillan, Business Book, 1999.

1.4 FINANCIAL AND MANAGEMENT ACCOUNTING

UNIT I

Financial Accounting - Definition - Accounting Principles - Concepts and conventions - Trial Balance – Final Accounts (Problems) - Depreciation Methods-Straight line method, Written down value method, Sinking fund method.

UNIT II

Financial Statement Analysis - Objectives - Reorganizing the Financial Statement Information - Techniques of Financial Statement Analysis: Comparative Statements, Common - Size statement, Trend Percentage - Accounting Ratios: construction of balance sheet using ratios (problems)-Dupont analysis.

UNIT III

Fund Flow Statement - Statement of Changes in Working Capital - Computation of Fund from Operations - Workings for Computation of various sources and uses - Preparation of Fund Flow Statement - Cash Flow Statement Analysis- Computation of Cash from Operations Problems - Distinction between Fund Flow and Cash Flow Statement. Problems

UNIT IV

Cost Accounting - Meaning - Distinction between Financial Accounting and Cost Accounting - Cost Terminology: Cost, Cost Centre, Cost Unit - Elements of Cost - Cost Sheet – Problems. Budget, Budgeting, and Budgeting Control - Types of Budgets - Preparation of Flexible and fixed Budgets, master budget and Cash Budget - Problems -Zero Base Budgeting.

UNIT V

Marginal Costing - Definition - distinction between marginal costing and absorption costing - Break even point Analysis - Contribution, p/v Ratio, margin of safety - Decision making under marginal costing system-key factor analysis, make or buy decisions, export decision, sales mix decision-Problems

References:

1. Advanced Accountancy - R.L.Gupta and Radhaswamy
2. Management Accounting - Brown and Howard
3. Management Accounting - Khan and Jain
4. Management Accounting - S.N.Maheswari
5. Management Accounting - Antony and Recece
6. Management Accounting - J.Batty

Questions : 80% of the questions shall be problems
20% of the questions shall be theory based.

1.5 QUANTITATIVE METHODS FOR MANAGEMENT

UNIT I

Linear, Non-Linear functions – graphical representation of functions, Constants, Variables – notion of Mathematical models – concept of trade off – notion of constants – concept of Interest. Basic Concept of differentiation – integration – Optimization concepts – use of differentiation for optimization of business problem- Optimization

UNIT II

Data Analysis – Uni-Variate – ungrouped and grouped data measures of central Tendencies, measures of dispersion – C V percentages (problem related to business applications). Bivariate – correlation and regression – problems related to business applications

UNIT III

Probability – definitions – addition and multiplication Rules (only statements) – simple business application problems – probability distribution – expected value concept – theoretical probability distributions – Binomial, Poison and Normal – Simple problems applied to business.

UNIT IV

Basic concept of index numbers – simple and weighted index numbers – concept of weights - types of index numbers – Business index number – CPT, WPI, Sensex, Nifty, Production Index, Time series – variations in Time Series for business forecasting.

UNIT V

Hypothesis testing of Proportion and Mean – single and two tailed tests – errors in Hypothesis Testing – Measuring the power of Hypothesis test. Chi-Square Tests

References :

1. Statistics for Management – Richard L Levin & Daid S Rubin
2. Statistical Methods – S P Gupta
3. Statistics for Business and Economics – R P Hoods – MacMillan India Limited
4. David M.Levine, Timothy C.Krehbiel and Mark L.Berenson
“Business Statistics: A First Course” , Pearson Education Asia
5. Amir D. Aczel, Complete Business Statistics, 5th edition, Irwin McGraw-Hill.

Questions : 80% of the questions shall be problems
20% of the questions shall be theory based.

1.6 CORPORATE COMMUNICATION

Unit 1:

Communication basics – Business Communication – components – Types – formal communication network – Work team communication – variables – goal – conflict resolution – non – verbal communication – Cross cultural communication – Business meetings – Business Etiquette.

Unit 2:

Understanding Corporate Communication – Employee Communication – Managing Government Relations – Writing for Media and Media Relations

Unit 3:

Corporate Communication in Brand Promotion – Financial Communication – Crises Communication.

Unit 4:

Report writing: Characterizing & business reports – Types and forms & reports – Project proposals – collection of data – tables constitution – charts – writing the report – documenting the sources – proof reading.

Unit 5:

Business Presentation: Written and oral presentation – work – team presentation – Delivering the business presentation visual aids – slides – electronic presentation – hand-outs – delivering the presentation – career planning – preparing Resume – job applications – preparation for a job interview – employment interviews – follow-up.

Suggested Readings:

1. Scot Ober, Contemporary business communication, fifth edition, biztantra.
2. Lesiler & Flat lay, Basic Business communication. Tata Mc Graw Hill.

1.7. COMPUTER APPLICATIONS IN MANAGEMENT USING SAP - PRACTICAL

Aim: To introduce the concepts of information technology and their application in management decision making.

Components of a Computer - Hardware and Software – Operations Systems – Directories and File properties.

MS OFFICE – Introduction to WORD, EXCEL and POWERPOINT

WORD – Creating a new document with templates & Wizard – Creating own document – Opening/modifying a saved document – converting files to and from other document formats – Using keyboard short-cuts & mouse – Adding symbols & pictures to documents – header and footers – Finding and replacing text – spell check and Grammar check – Formatting text - paragraph formats - adjusting margins, line space – character space – Changing font type, size – Bullets and numbering – Tables – Adding, editing, deleting tables – Working within tables – Adding, deleting, modifying rows and columns – merging & splitting cells.

EXCEL – Working with worksheets – cells – Entering, editing, moving, copying, cutting, pasting, transforming data – Inserting and deleting of cells, rows & columns – Working with multiple worksheets – switching between worksheets – moving, copying, inserting & deleting worksheets – Using formulas for quick Calculations – Working & entering a Formula – Formatting a worksheet – Creating and editing charts – elements of an Excel Chart – Selecting data to a chart – Types of chart – chart wizard – Formatting chart elements – Editing a chart – Printing charts.

POWERPOINT – Creating new presentations – Auto content wizard – Using template – Blank presentation – Opening existing presentations – Adding, editing, deleting, copying, hiding slides – Presentations – Applying new design – Adding graphics – Using headers and footers – Animations text – Special effects to create transition slides – Controlling the transition speed – Adding sounds to slides – Using action buttons.

TALLY – Introduction and Installation, Required Hardware, Preparation for installation of Tally software, installation, Working in Tally: Opening new company, Safety of Accounts or Password, Characteristics, Making Ledger Accounts, Writing voucher, voucher entry, Making different types of vouchers, Correcting sundry debtors and sundry creditors accounts, Preparation of Trial Balance, Books of Accounts, Cash Book, Bank Books, Ledger Accounts, Group summary, Sales Register and Purchase Register, Journal Register, Statement of Accounts & Balance Sheet.

ERP & SAP : Introduction – Need for ERP – Advantages – Major ERP Packages – SAP: Features – ABAP: Logon to SAP Environment – ABAP Dictionary – Functions – Objects – Managing SAP Application

Practicals: Simple problems to be done in WORD, EXCEL and POWERPOINT using all the above mentioned topics.

References:

OFFICE 2000 Complete – BPB

Windows 98 Complete – BPB

Windows 98 6 in one by Jane Calabria and Dorothy Burke – PHI

Using Microsoft Office 2000 by Ed, Bott – PHI

Enterprise Resource planning (ERP): Text and case studies by Murthy, C S V, HPH

Teach yourself SAP in 24 hours by George Anderson; Danielle Larocca - Pearson Education

2.1 OPERATIONS MANAGEMENT

UNIT I : Operations Management – Meaning – Importance – historical contributions – System view of OM - Operation strategy and competitiveness - Functions of OM – types of production systems

UNIT II : Product design and process selection – Evaluation and Selection of appropriate Production and Operations technology. Product Design and process selection.

Types of layout – analysis and selection of layout – Product and / or Process layout, Cellular, Lean and Agile manufacturing systems – Computer Integrated Manufacturing Systems - Assembly line balancing.

UNIT III : Production planning and control – meaning – functions – aggregate planning – master production schedule (MPS) – Material requirement planning (MRP) – BOM – Capacity requirement planning (CRP) – Techniques – problems in MRP and CRP – an introduction to MRP II and ERP – Business Process Re-engineering - Total Productive Maintenance (TPM)

UNIT IV : Materials management – functions – material planning and budgeting – Value Analysis - purchase functions and procedure - inventory control – types of inventory – safety stock – order point – service level – inventory control systems – perpetual – periodic – JIT – KANBAN.

UNIT V : Total Quality Management Concept - Statistical Quality Control for Acceptance Sampling and Process Control – Concepts of O.C.C. Curve – Use of the O.C. Curve – Concept of Type I and Type II error – Quality movement – Quality circles — ISO Quality Certifications and types – Quality assurance – Six Sigma concept.

References :

1. Production and Operations Management – Everest E Adam & Ebert – PHI – publication forth edition.
2. Operations Management (Theory and Problems) – Joseph G Monks – McGraw Hill Intl.
3. Production and Operations Management – S N Chary – TMH Publications
4. Production and Operations Management – Pannerselvam, PHI
5. Lee J. Krajewski and Larry P. Ritzman, “Operations Management: Process and value Chains”, 7th Edition, PHI, 2007
6. Hunawalla and Patil – production and Operations Management, Himalaya.
7. Modern Production and operations management – E.S Buffa.

8. Lee J. Krajewski and Larry P. Ritzman, “ Operations Management: Strategy and Analysis”, Addison Wesley.
9. Chase, Aquilano & Jacobs “Production and Operations Management”, Tata McGraw Hill.

Questions : 40% of the questions shall be problems
60% of the questions shall be theory based.

2.2 MARKETING MANAGEMENT

Unit I

Marketing Concepts and Tasks, Defining and delivering customer value and satisfaction - Value chain - Delivery network, Marketing environment, Adapting marketing to new liberalised economy - Digitalisation, Customisation, Changing marketing practices, e-business - setting up websites; Marketing Information System, Strategic marketing planning and organization.

Unit II

Buyer Behaviour, Market Segmentation and Targeting, Positioning and differentiation strategies, Product life cycle strategies, New product development, Product Mix and Product line decisions, Branding and Packaging, Price setting - objectives, factors and methods, Price adapting policies, Initiating and responding to price changes.

Unit III

Marketing channel system - Functions and flows; Channel design, Channel management - Selection, Training, Motivation and evaluation of channel members; Channel dynamics - VMS, HMS, MMS; Market logistics decisions.

Unit IV

Integrated marketing communication process and Mix; Advertising, Sales promotion and Public relation decisions. Direct marketing - Growth, Benefits and Channels; Telemarketing; Salesforce objectives, structure, size and compensation.

Unit V

Identifying and analysing competitors, Designing competitive strategies for leaders, challengers, followers and nichers : Customer Relationship marketing - Customer database, Data warehousing and mining. Attracting and retaining customers, Customerism in India, Controlling of marketing efforts.

Global Target market selection, standardization Vs adoption, Product, Pricing, Distribution and Promotional Policy.

References :

1. Marketing Management - Philip Kotler - Pearson Education/PHI 12th Edition, 2006.
2. Marketing Management - Rajan Saxena - Tata McGraw Hill, 2002.
3. Marketing Management: Planning, Implementation and Control: Global Perspective Indian Context – VS Ramasamy & S. Namakumari - Macmillan India, 2007.
4. Marketing Management: A South Asian Perspective – Philip Kotler and Kevin Lane Kotler, Pearson Education, 11th Edition, 2007.
5. Basic Marketing - Perreault and McGarthy - Tata McGraw Hill, 2002.
6. Case and Simulations in Marketing - Ramphal and Gupta - Gollgatia, Delhi.
7. Case Studies in Marketing - R.Srinivasan - PHI.
8. Marketing concepts and cases – Michael J Etzel, Bruce J Walker, William J Stanton and Ajay Pandit, TMH 13th Edition, New Delhi, 2007.
9. Marketing Management – S.Jayachandran - TMH, 2003.

2.3 FINANCIAL MANAGEMENT

Subject Description :

Financial Management emphasizes the functions of financial management explaining the investment, finance, dividend and working capital function along with the practical management problems.

Goals:

To enable the students to learn the basic functions, principles and concepts of finance in management.

Objectives:

On successful completion of the course the students should have:

To learn the various functions of financial management along with the application.

To learn capital budgeting and cost of capital.

To understand capital structure, dividend policy and working capital management.

UNIT I

Objectives and functions of Financial Management - Role of Financial Management in the organisation - Risk-Return relationship- Time value of money concepts - Indian Financial system - Legal, Regulatory and tax framework. Sources of Long term finance - Features of Capital market development in India - Role of SEBI in Capital Issues.

UNIT II

Capital Budgeting - methods of appraisal - Conflict in criteria for evaluation - Capital Rationing - Problems - Risk analysis in Capital Budgeting.

UNIT III

Cost of Capital - Computation for each source of finance and weighted average cost of capital - EBIT -EPS Analysis - Operating Leverage - Financial Leverage - problems.

UNIT IV

Capital Structure Theory - Net Income Approach - Net Operating Income Approach - MM Approach - Dividend Policy - Types of Divided Policy - Dividend Policy and share valuation - CAPM.

UNIT V

Working Capital Management - Definition and Objectives - Working Capital Policies - Factors affecting Working Capital requirements - Forecasting Working Capital requirements (problems) - Cash Management - Receivables Management and - Inventory Management - Working Capital Financing - Sources of Working Capital and Implications of various Committee Reports.

References :

1. Richard A.Brealey, Stevart C.Myers, “Principles of Corporate Finance” McGraw Hill, New York.
2. James C.Van Horns, “Financial Management & Policy” Prentice Hall of India (P) Ltd., New Delhi.
3. John J.Hampton, “Financial Decision Making – Concepts, Problems and Cases” Prentice Hall of India (P) Ltd., New Delhi (1994).
4. Prasanna Chandra, “Financial Management–Theory&Practice”, Tata McGraw Hill, New Delhi (1994).
5. B J Camsey, Engene F.Brigham, “Introduction to Financial Management”, The Gryden Press.
6. I.M.Pandey, “Financial Management”, Vikash Publishing, New Delhi.

2.4 HUMAN RESOURCE MANAGEMENT

Unit I : Human Resource Function

Human Resource Philosophy - Changing environments of HRM - Strategic human resource management - Using HRM to attain competitive advantage - Trends in HRM - Organisation of HR departments - Line and staff functions - Role of HR Managers.

Unit II : Recruitment & Placement

Job analysis : Methods - IT and computerised skill inventory - Writing job specification - HR and the responsive organisation.

Recruitment and selection process : Employment planning and forecasting - Building employee commitment : Promotion from within - Sources, Developing and Using application forms - IT and recruiting on the internet.

Employee Testing & selection : Selection process, basic testing concepts, types of test, work samples & simulation, selection techniques, interview, common interviewing mistakes, Designing & conducting the effective interview, small business applications, computer aided interview.

Unit III : Training & Development

Orientation & Training : Orienting the employees, the training process, need analysis, Training techniques, special purpose training, Training via the internet.

Developing Managers : Management Development - The responsive managers - On-the-job and off-the-job Development techniques using HR to build a responsive organisation. Management Developments and CD-Roms - Key factor for success.

Performance appraisal : Methods - Problem and solutions - MBO approach - The appraisal interviews - Performance appraisal in practice.

Managing careers : Career planning and development - Managing promotions and transfers.

Unit IV : Compensation & Managing Quality

Establishing Pay plans : Basics of compensation - factors determining pay rate - Current trends in compensation - Job evaluation - pricing managerial and professional jobs - Computerised job evaluation.

Pay for performance and Financial incentives : Money and motivation - incentives for operations employees and executives - Organisation wide incentive plans - Practices in Indian organisations.

Benefits and services : Statutory benefits - non-statutory (voluntary) benefits - Insurance benefits - retirement benefits and other welfare measures to build employee commitment.

Unit V : Labour relations and employee security

Industrial relation and collective bargaining : Trade unions - Collective bargaining - future of trade unionism. Discipline administration - grievances handling - managing dismissals and separation.

Labour Welfare : Importance & Implications of labour legislations - Employee health - Auditing HR functions, Future of HRM function.

References:

1. Gary Dessler, "Human Resource Management", Seventh edition, Prentice-Hall of India P.Ltd., Pearson.
2. H.John Bernardin & Joyee E.A.Russel, Human Resource Management - An experiential

approach, 4th Edition, McGraw-Hill International Edition., 2007

3. David A. DeCenzo & Stephen P. Robbins, Personnel/Human Resource Management, Third edition, PHI/Pearson.

4. VSP Roa, Human Resource Management : Text and cases, First edition, Excel Books, New Delhi - 2000.

5. Dr. R.Venkatapathy & Assissi Menacheri, Industrial Relations & Labour Welfare, Adithya Publications, CBE, 2001.

6. Robert L.Gibson and Marianne H.Mitchell, Introduction to Counseling and Guidance, VI edition, PHI, 2005.

2.5 QUANTITATIVE TECHNIQUES

AIM

To enable the students to learn the techniques of operation Research and resources Management and their application in business management.

UNIT I

Mathematical Models – deterministic and probabilistic – simple business examples – OR and optimization models – Linear Programming – formulation – graphical solution –Dual of linear programming problem – Economic interpretation

UNIT II

Transportation model – Initial Basic Feasible solutions – optimum solution for non – degeneracy model – Trans-shipment Model – Assignment Model

UNIT III

Network Model – networking – CPM – critical path – Time estimates – critical path – crashing, Resource levelling, Resources planning. Waiting Line Model – Structure of model – M/M/1 for infinite population.

UNIT IV

Inventory Models – Deterministic – EOQ – EOQ with Price Breaks – Probabilistic Inventory Models - Probabilistic EOQ model

UNIT V

Simulation – types of simulation – Monte Carlo simulation – simulation problems.
Decision Theory – Pay off tables – decision criteria – decision trees.

References :

1. Operations Research – An Introduction – Hamdy A. Taha
2. Operations Research – Kanti Swarup, Gupta And Man Mohan
3. Operations Research – Dr. J.K. Sharma Macmillan Indian Ltd.
4. Operations Research – R. Panneerselvam, 2nd Edition, PHI, 2007
5. Operations Research, Concepts and cases – Fredrick S Hillier and Herald J Lieberman, 8th Edition, TMH, 2003
6. Hamdy A Taha, “An Introduction to Operations Research, Prentice Hall, Sixth edition, 2000
7. Ronald L. Rardin, “Optimization in Operations Research”, Pearson Education
8. J. K. Sharma, “ Operations Research: Theory and Applications”, Macmillan , 1997

9. U.K. Srivastava, G.V. Shenoy, S. C. Sharma, “ Quantitative Techniques for Managerial Decision”, Second Edition, Prentice Hall of India

Questions : 80% of the questions shall be problems
20% of the questions shall be theory based.

2.6 .RESEARCH METHODS FOR MANAGEMENT

Subject Description :

Research Methods of Management is emphasizing on the methodology of research and its application in managerial decision making, explaining hypothesis, meaning and types, sampling design along with the various parametric and non-parametric test.

Goals:

To familiarize the students with methodology of research and its application in managerial decision making situations.

Objectives:

On successful completion of the course the students should have:

Understood the scope and significance of research in business decisions. Studied and understood sampling techniques along with hypothesis testing. Understood various scaling techniques and measurement scales .

UNIT I

Research - meaning - scope and significance - Types of research - Research Process - Characteristics of good research - Scientific method - Problems in research - Identifying research problem – concepts, constructs and theoretical framework.

UNIT II

Hypothesis:- meaning - sources - Types - formulation Research design - Types - case study - features of good design - measurement - meaning - need Errors in measurement - Tests of sound measurement Techniques of measurement - scaling Techniques - meaning - Types of scales - scale construction techniques.

UNIT III

Sampling design - meaning - concepts - steps in sampling - criteria for good sample design - Types of sample designs - Probability and non-probability samples. Data collection:- Types of data - sources - Tools for data collection methods of data collection - constructing questionnaire - Pilot study - case study - Data processing:- coding - editing - and tabulation of data - Data analysis.

UNIT IV

Test of Significance:- Assumptions about parametric and non-parametric tests. Parametric Test - T test, F Test and Z test - Non Parametric Test - U Test, Kruskal Wallis, sign test. Multivariate analysis-factor, cluster, MDS, Discriminant ananalysis. (NO Problems). SPSS and its applications.

UNIT V

Interpretation - meaning - Techniques of interpretation - Report writing:- Significance - Report writing:- Steps in report writing - Layout of report - Types of reports - Oral presentation - executive summary - mechanics of writing research report - Precautions for writing report - Norms for using Tables, charts and diagrams - Appendix:- norms for using Index and Bibliography.

References:

1. Rao K.V. Research methods for management and commerce - sterling
2. Zigmund, Business Research Methods
3. Donald R.Cooper and Pamela S.Schindler - Business Research Methods - Tata McGraw Hill, 2007
4. Naresh K Malhotra – Marketing Research: An Applied Orientation, Pearson Education, 4th Edition, 2004
5. Wilkinson Bhadarkar - Methodology and Techniques of Social Research - Himalaya.
6. Anderson etal - Assignment and Thesis writing.
7. Uma Sekaran, Research Methods for Business, Wiley Publications.

Note : 20% of the questions shall be problems
80% of the questions shall be theory based.

3.1 INTERNATIONAL BUSINESS

UNIT - I

Introduction and Overview

Introduction and Overview : Introduction - The Globalization of the World Economy - The Changing Nature of International Business - Differences in International Business.

UNIT - II

Country Factors

National Differences in Political Economy : Introduction - Political Systems - Economic Systems - Legal Systems - The Determinants of Economic Development - States in Transition.

Differences in Culture : Introduction - Social Structure - Religion - Language - Education - Culture and the Workplace - Cultural Change - Cross-Cultural Literacy - Culture and competitive Advantage.

UNIT - III

The Global Trade and Investment Environment

International trade Theory : Introduction - An Overview of Trade Theory - Mercantilism - Absolute Advantage - Comparative Advantage - Heckscher-Ohlin Theory - The New Trade Theory - National Competitive Advantage - Porter's Diamond.

The Revised Case for Free Trade - Development of the World - Trading System - WTO & development of World trade - Regional grouping of countries and its impact.

UNIT - IV

Foreign Direct Investment : Introduction - Foreign Direct Investment in the World Economy - Horizontal Foreign Direct Investment - Vertical Foreign Direct Investment. Benefits and advantages to host and home countries.

The Global Monetary System

The Foreign Exchange Market : Introduction - The Functions of the Foreign Exchange Market.

UNIT - V

The Strategy and Structure of International Business

The Strategy of International Business : Introduction - Strategy and the Firm - Profiting from Global Expansion - Pressures for Cost Reductions and Local Responsiveness - Strategic Choice.

Mode of Entry and Strategic Alliances : Introduction - Entry Modes - Selecting and Entry Mode - Strategic Alliances - Making Alliances Work.

Exporting, Importing and Counter trade : Introduction - The Promise and Pitfalls of Exporting - Improving Export Performance - Export and Import Financing - Export Assistance - Counter trade.

References :

1. Hill.C.W., International Business : Competing in the Global market place, Irwin-McGraw Hill, 1999.
2. Philip R.Cateora, International Marketing, Irwin McGraw Hill, 9th edn.
3. Shivaramu, International Business, Macmillan India.
4. Francis Cherunilam, International Business, Wheeler Publications.
5. Charles W.L., Hill, International Business, Irwin-McGraw Hill, 1998.

3.2. MANAGEMENT INFORMATION SYSTEM

Unit I

Foundations of Information Systems: A framework for business users - Roles of Information systems - System concepts - Organisation as a system - Components of Information Systems - IS Activities - Types of IS.

Unit II

IS for operations and decision making: Marketing IS, Manufacturing IS, Human Resource IS, Accounting IS and Financial IS - Transaction Processing Systems- Information Reporting System - Information for Strategic Advantage.

Unit III

DSS and AI: DSS models and software: The decision making process - Structured, Semi Structured and Unstructured problems; What if analysis, Sensitivity analysis, Goal-seeking Analysis and Optimizing Analysis. Overview of AI, Neural Networks, Fuzzy Logic Systems, Genetic Algorithms - Expert Systems.

Unit IV

Managing Information Technology: Managing Information Resources and technologies - IS architecture and management - Centralised, Decentralised and Distributed - EDI, Supply chain management & Global Information technology Management.

Unit V

Security and Ethical Challenges: IS controls - facility control and procedural control - Risks to online operations - Denial of service, spoofing - Ethics for IS professional - Societal challenges of Information technology.

TEXT BOOKS

1. James A O'Brien, "Management Information Systems", Tata McGraw Hill, 4th Edition, 1999.
2. Effy Oz, "Management Information Systems", Vikas Publishing House, Third Edition, 2002.
3. Kenneth C Laudon and Jane P Laudon, "Management Information System", 9th Edition, PHI, New Delhi, 2006.
4. Waman S Jawadekar , "Management Information System Text and cases", Third Editions, Tata McGraw-Hill ,2007.
5. R.Srinivasan, "Strategic Management", IInd edition, Prentice Hall of India, New Delhi.
6. M.Senthil, "Management Information System", 2003.

3.3 to 3.6 ELECTIVE COURSES

3.3 TELECOMMUNICATION MANAGEMENT ESSENTIALS

Objectives:

Providing an insight to the Telecommunication Management and its fundamentals. Telecom management is what enables an operator to manage communication networks/ infrastructure, services, regulatory environment and customers as well as their relationships.

Unit I : Introduction to Telecommunication Management – Fundamentals of Telecommunication: Basic definitions and terminology, Basic elements, Analog versus digital communication, networks, Communication channels, Modulation - Telecom eco-system, business models.

Unit II : Evolution of Telecommunications: History and evolution of Telecommunications, Early telecommunications, The telegraph and the telephone, Radio and television Computer networks and the Internet - Evolution and growth of Telecom Industry in India and the various milestones.

Unit III : Modern telecommunication and Service Providers: Modes of Telecommunication – Telephone, Radio and television, The Internet, Local Area Networks and Wide Area Networks - Service Providers: Wire-line/ Wireless Carriers, Cable Companies, Satellite Carriers and Virtual Network Operators.

Unit IV : Telecom Eco System: Hardware Manufacturer, Software developers, application developers, Content developers, Professional Consulting Service Provider - Relevance of infrastructure management, role of infrastructure players, business model, etc.

Unit V : Society and telecommunication - Economic impact, Microeconomics, Macroeconomics and Social impact of Telecommunications - Market forces and dynamics and the impact on Business and growth of Industry. Societal transition owing to telecommunications..

Reference:

1. The Essentials of Telecommunications Management By Jayraj Ugarkar. Publication Author House, 2010.
2. Telecom Management Crash Course: A Telecom Company Survival Guide By P.J Louis. Publication McGraw-Hill Professional, 2002
3. Introduction to telecommunications By Anu A. Gokhale. Publications Cengage Learning, 2004

4. Telecommunications Essentials, Second Edition: The Complete Global Source - by Lillian Goleniewski & Lillian Goleniewski
5. Introduction to Telecommunications Management - Gaborone, Botswana

3.4 TELECOMMUNICATION NETWORK FUNDAMENTALS

Objectives:

Understanding Wireless Telecom Arch. Radio Network, Voice Network, Data Network, Multi Media. IT Billing, Provisioning and Reporting.

Unit I : Introduction – Understanding of Telecommunication Network, Terminology and basic fundamentals. Understanding of terminals, links and nodes, circuit switching or message switching, transmission network.

Unit II : Basic Network Technologies - Network Signaling and its Application; Message and protocols; Basic components of telecommunication network- terminals, telecommunications processors, telecommunications channels, computers, and telecommunications control software.

Unit III : Networks Structure- Understanding Telecommunication network structure- The control plane (also known as signalling), The data plane or user plane , The management plane which carries the operations and administration traffic required for network management.

Unit IV : Satellite Communication System - fixed (point-to-point) services, communications satellites, microwave radio relay technology - Satellite technologies, infrastructure, services and broadcasting. Satellite Applications- television, mobile/ telephone, radio, internet.

Unit V : The Internet - The Economics of and Requirement for becoming a Telecommunication Carrier. Understanding protocols, broadband, browsers, Ethernet, wi-fi technologies. Future trends of internet technologies.

References:

1. Fundamentals of telecommunications network management By Lakshmi G. Raman, IEEE Communications Society. Publications IEEE Press.
2. Telecommunications network management By Henry Haojin Wang. Publications McGraw-Hill, 1999.

3.5 Mobile -COMMERCE (M- Commerce)

Objectives:

Presenting the Over View of Mobile Commerce (M-Commerce)

Unit I : Introduction – History of mobile commerce and its evolution - Concepts of mobile commerce and its usage, significance of M-commerce and its impact on business - Advantages for telecom Players and advertisers.

Unit II : Products and services available: Mobile ticketing, Mobile vouchers, coupons and loyalty cards, Content purchase and delivery, Location-based services, Information services, Mobile banking, Mobile Store Front, Mobile Browsing, Mobile Purchase, Mobile marketing and advertising.

Unit III : Mobile Payment: Methods, Payment types. Primary models for mobile payments: - Premium SMS based transactional payments, Direct Mobile Billing, Mobile web payments (WAP), Contactless NFC (Near Field Communication) - Challenges for Mobile Payment, Trends and growth.

Unit IV : Mobile commerce service provider (mCSP) – What is Mobile commerce service provider, tools and services they need to distribute/ sell products and services over both the Internet and Mobile Internet and manage their online enterprises - Areas of mCSPs services.

Unit V : Mobile banking : Mobile banking conceptual model, Trends in mobile banking, Mobile banking business models- Bank-focused model, Bank-led model, Non-bank-led model. Mobile Banking Services, Challenges for a Mobile Banking Solution.

References:

1. The March Of Mobile Money, Author - Sam Pitroda, Mehul Desai, Publisher: Harpercollins (2010)
2. M Commerce: Technologies, Services, and Business Models, Author - Norman Sadeh.
3. Mobile Commerce: Opportunities, Applications, and Technologies of Wireless Business, Author - Paul May.
4. Mobile Commerce Applications, Author - Nansi Shi.

3.6 TELECOM INDUSTRY IN INDIA

Objectives:

The subject presents an overview of the telecom industry in India. The history and the evolution of the India as the super power in telecom industry. The growth of India as the fastest growing Telecom market in the world.

Unit I : Introduction – History of the Indian Telecom industry. Evolution of Telecom sector, Government control. DOT, Creation of BSNL, Telecom Policy changes etc.

Unit II : Telecommunication Reforms- Policy changes and telecom reforms. Impact of reforms on the telecom industry. Role definitions from being a service provider as well as Policy controller. Formation of TRAI and its role and responsibilities. Regulatory and part of their role.

Unit III : Telecom Industry analysis and diagnosis: Analysis of the India's Telecom industry and its strengths and its growth potential. Impact of policies on customer base and adoption. Growth owing to deployment and reach.

Unit IV : Telecom Operators: Privatization and entry of new players and their growth in India. Impact of Telecom reforms on the performance of private players. Subscriber base, tele-density, growth of subscriber base and projections.

Unit V : Telecom Infrastructure in India: Entry of Private Telecom Infrastructure players and their impact on Telecom performance. Role of infrastructure players in other areas like IT hardware/ Telecom hardware/ software, Call centre services etc.

References:

1. Telecommunications Industry In India by Dilip Subramanian Publisher: Social Science Press (2010)
2. India's telecommunications industry: history, analysis, diagnosis- By Ashok V. Desai. Publications SAGE, 2006.
3. India Telecom Vol 4: Overview of the Indian Market 1999-2000. Publications Information Gatekeepers Inc
4. Telecommunications reform in India- By Rafiq Dossani. Publications Greenwood Publishing Group, 2002
5. Competition, Privatisation & Reform: The Indian Telecom Industry by Suwendu Sekhar Dash. Publisher Academic Excellence Publishers & Distributors
6. Indian Telecom Industry: Trends And Cases by Nasreen Taher. Publisher: Icfai

4.1. STRATEGIC MANAGEMENT : INDIAN AND GLOBAL CONTEXT

Objectives : Students are expected to integrate their knowledge gained in various functional areas to make business decisions, from the general manager's point of view in the global and Indian context.

Teaching and Examination: Students are expected to keep abreast of the contemporary business practices by reading the business practices by reading the business magazines and management journals.

Case studies, application project Seminars and group exercises will supplement the class lectures.

Unit I

Corporate Strategic Planning - Mission - Vision of the firm - Development, maintenance and the role of leader - Hierarchical levels of planning - Strategic planning process. Strategic management Practice in India. Competitive advantage of Nations and its implication on Indian Business.

Unit II : Environment Analysis & Internal Analysis of Firm:

General environment scanning, competitive & environment analysis - to identify opportunities & threat - Assessing internal environment through functional approach and value chain - identifying critical success factors - to identify the strength & weakness - SWOT audit - core competence - Stockholders' expectations, Scenario-planning - industry analysis.

Unit III : Strategy Formulation

Generic strategies - Grand strategies - Strategies of leading Indian companies - The role of diversification - limits - means and forms. Strategic management for small organisations, non-profit organisations and large multi product and multiple market organisations.

Unit IV : Tools of Strategy : Planning and evaluation :

Competitive cost dynamics - experience curve - BCG approach - cash flow implication -IA-BS matrix - A.D.Littles Life-cycle approach to strategic planning - Business portfolio balancing - Assessment of economic contribution of strategy - Strategic funds programming.

Unit IV : Strategy implication & Control :

Various approaches to implementation of strategy - Matching organisation structure with strategy - 7S model - Strategic control process - Du Pont's control model and other Quantitative

and Qualitative tools - Balanced score card - M.Porter's approach for Globalisation - Future of Strategic Management.

References :

1. Pearce & Robinson, Strategic Management, All Indian Travellers N D.
2. A.C.Hax and NS, Strategic Management: An Integrative Perspective, Majifu, Prentice Hall.
3. Michael Porter, Competitive strategies.
4. John A Pearce II and Richard B Robinson, “Strategic Management: Formulation, Implementation and Control”, 9th Edition, TMH, 2007
5. Michael Porter, Competitive Advantage of Nations.
6. Samul C. Certo and J.Paul Peter, Strategic Management, Second Edn. Concepts & Application, McGraw Hill.
7. Gregory G.Dess and Alex Miller, Strategic Management, McGraw Hill.
8. Gerry Johnson & Kevan scholes, Exploring Corporate Strategy: Text & Cases, Prentice Hall India.
9. Jauch.L., Rajive Gupta & William.F.Glueck, Business Policy and Strategic Management, Frank Bros&Co., 2003.
10. Fred R.David, Strategic Management Concepts & Cases, Pearson, 2003.
11. R.Srinivasan, Strategic Management, II edition, Prentice Hall of India, New Delhi.

4.2 to 4.5 ELECTIVE COURSES

4.2. TELECOM STANDARDS, POLICIES & REGULATIONS

Objectives:

Providing the Over View of Telecom Standards, Policies & Regulations

Unit I : Introduction: Telecom Standards, Policies & Regulations, role of international institutions- ITU, UNESCO, and the various satellite organizations such as INTELSAT, Regulatory Functions of TRAI - Recommendatory and Tariff setting functions of TRAI.

Unit II : Regulatory Bodies: Acts, roles and responsibilities of regulatory bodies. Licenses for Communication services, Unified Access Services, Cellular and Mobile Services, Policies and implementation.

Unit III : Regulations and Policies: Regulation for Fixed and Limited Mobility services, Value Added Services and OSPs, Long Distance Services, Internet Services, Policies

Unit IV : Service standards and controls: Interconnection Arrangements, Communication Tarrifs and Rates, Spectrum Management, Regulation of Numbers, Universal Service framework, Mobile Number Portability.

Unit V : Government operations: role of Government in India, Government operated services, Policies and Services, circles, Benefits and fallacies.

References:

1. International Telecommunication Standards Organizations, By Andrew C. Macpherson.
2. Communications Law In India (Legal Aspects Of Telecom, Broadcasting And Cable Services), Author - Vikram Raghavan.

3. India Telecom Laws And Regulations Handbook Volume 1 Strategic Information And Basic Regulations, Author - Usa Ibp Usa,
4. The Telecom Regulatory Authority of India Act, 1997 By Georg Thieme Verlag
5. India Telecom 2000: Vol. 1: Telecommunications Policy and Infrastructure. Publications Information Gatekeepers Inc
6. India Telecom Series: Vol. 2: Cellular & Wireless Markets. Publications Information Gatekeepers Inc
7. Broadcast management in India: major guidelines and policy frameworks By Angela Wadia. Publications Kanishka Publishers Distributors, 2007

4.3 TELECOM BUSINESS MANAGEMENT

Objectives:

Providing the Over View of Telecom Business Management

Unit I : Introduction to Telecom Business Management and process: eTOM, benefits of eTOM, Understanding eTOM - Managing Service Provider Relationships and Effectively Resolving Disputes.

Unit II : Telecom Business Operations: Vertical Processes, fulfillment, Assurance, Billing, Operations Support and Readiness; Horizontal Processes: Customer Relationship Management, Service Management and Operations, Resource Management and Operations, Supplier and Partner relationship Management, contract negotiations and Contract Lifecycle Management

Unit III : Strategy, Infrastructure and Product: Vertical Processes, Strategy, Infrastructure Lifecycle Management, Product Lifecycle Management; Horizontal Processes: Marketing and Offer Management, Service Development and Management, Resource Development and Management, supply-Chain Development and Management.

Unit IV : Revenue Assurance: Invoice Validation, Error Correction and Budget Protection, Average Revenue per User, data quality and process improvement methods, revenues and cash flows.

Unit V : Enterprise Management: Processes, Strategic and Enterprise Planning, Enterprise Risk Management, Financial and Asset Management, Stakeholder and External Relations Management, Human Resource Management.

References:

1. What Great Telecom Managers Know: How to Get the Recognition You Deserve by Demonstrating Your Value and Roi by Roger K. Yang
2. Telecommunications Expense Management: How to Audit Your Bills, Reduce Expenses, and Negotiate Favorable Rates by Michael Brosnan
3. Telecom Audit : A Complete Cost-Reduction Strategy for Your Corporate Telecommunications Bills by M S Mastel
4. Telecommunications Cost Management - by S.C. Strother

5. Understanding changing telecommunications: building a successful Telecom By Anders Olsson
6. Telecommunications Management - by Nolan Vincent Jones
7. The Irwin Handbook of Telecommunications Management - James Harry Green
8. Telecommunications Essentials, Second Edition: The Complete Global Source - by Lillian Goleniewski & Lillian Goleniewski
9. Understanding Telecom Management - by Vinayshil Gautam, Sanjay Sinha
Write a Review
Publisher: Concept Publishing Company
10. Introduction to Telecommunications Management - Gaborone, Botswana

4.4 TELCO REVENUE ASSURANCE

Objectives:

To provide an understanding to setup, execute and manage the Revenue Assurance function within telecommunications companies. This subject provides participants with information about how to use new technologies and revolutionary new approaches to help make revenue assurance faster, better, easier and more efficient.

Unit I : Revenue Assurance: What is Revenue Assurance (RA)? Why is RA important? Challenges of Revenue Assurance, Understanding the problem and defining leakages.

Unit II : Scope of Revenue Assurance: Defining scope and Revenue Assurance Icon; Understanding eTOM Basic Model, Building on the eTOM, Revenue management chain. Defining Revenue Assurance objectives and approach to achieving them. Understanding Leakage management, Risk management, leakage prevention.

Unit III : RA functions and Disciplines: Defining and understanding RA functions, roles and the coverage models. RA versus Operational Integrity. Operationalizing Revenue Assurance- Baseline, Monitoring and Auditing, Synchronization of practices and RA management chain.

Unit IV: Rationalization & Mobilization of RA activities: leakage, leakage identification, understanding RA costs, leakage mapping and noise, Automated RA. Framework for assessment of RA capabilities, Opportunity map, Implementation avenues, Buying and installing a revenue assurance system

Unit V Revenue Assurance Monitoring and reporting: Baseline reporting, Technical challenges to Baseline reporting; Investigating and prospecting- What is it? Techniques applied. Fundamentals of Report management and Audit functions and characteristics of Audit Processes.

References:

1. The Telco Revenue Assurance Handbook By Rob Mattison. Publications Lulu.com, 2005
2. The Revenue Assurance Standards - By Rob Mattison. Publications- Lulu Enterprises Inc., 2010

3. Revenue Assurance for Service Providers- By Mark Yelland, David Sherick. Publications- Authors OnLine, Limited, 2009

4.5. TELCO CHURN MANAGEMENT

Objectives:

Churn has a direct impact on revenue and the subscriber base of

Unit I : Churn in Telecom: What is Churn Management? Opportunity arising out of churn in telecom industry. Why is churn inevitable and the cost or impact of churn on operators. How telecom Industry is founded on churn fundamentals.

Unit II : Churn Taxonomy: Categorization of Churn- Involuntary and Voluntary Churn Management. Managing Involuntary churn. Definitions of Voluntary churn- deliberate churn. Technology based churn- Handset churn, feature/ function based churn, network churn. Dealing with Technology churn.

Unit III : Traditional Views of Churn Management: How other industries manage churn. Pre-emptive churn management. Loyalty programs, Reactive churn Management. Systematic approach to churn issues.

Unit IV: Churn Management- Basic rules of churn- The basic factors and the ability to manage churn; The customer factor- How to manage expectations; Timing Issues; Strategic approaches to Churn: Offensive strategy- continued expansion and predatory acquisition and Defensive Strategy- Retention Management. Factors of effective churn Management.

Unit V : Managing Relationships, Not Churn: What are you trying to manage? Build relationship with subscribers- Relationship models, participating relationship. Customer Management System to enhance relationship and the organization which manages it. What is Customer Management system and introduction of segmentation- framework and customer value.

References:

1. Telecom Churn Management: The Golden Opportunity (Customer Telecare Series) by Rob Mattison. Publisher: Apdg Publishing Released: 2001
2. Strategic Marketing in Telecommunications: How to Win Customers, Eliminate Churn, And Increase Profits in The Telecom Marketplace by Maureen Rhemann. Publisher: Aegis Publishing Group, Ltd.
3. The Telco Churn Management Handbook. Rob Mattison. Publisher Lulu.com, 2005