

University of Pune



M.Com. e-commerce Part II

w.e.f. 2010-11

M.Com(e-Com.)

Programme

Structure

III 301	Business models for E-Commerce
302	DBMS
303	E-Banking and Financial Services
304	Management Control System
305	Netiquettes and Cyber Security
306	M-Commerce technology and WAP Architecture
307	Summer Project Work

Semester with Code	Course title with Code No.
IV 401	Case Studies in E-Commerce & M-Commerce
402	Internet & Web designing
403	Accounting Information System
404	E-marketing & CRM
405	Network infrastructure and e-payments
406	Business Research & Analytics
407	Project Report and Viva Voce

M.Com. (e-Commerce)

Semester III

Subject Name :- Business Models for E- Commerce

Course Code :- 301

Objectives :-

1. To learn different business strategy
2. To learn different elements of e-commerce

Unit No.	Topic	Periods
1.	Business Strategy 1.1 Introduction 1.2 Strategic implementation of IT 1.3 Technology 1.4 Business environment and capability 1.5 Existing business strategy 1.6 Strategy formulation and implementation planning	6
	Business to Business(B2B) Electronic Commerce	
2.	Inter organization transactions 2.1 Introduction 2.2 The credit transaction and trade cycle 2.3 A variety of transactions 2.4 Pens and things	3
3.	Electronic Markets 3.1 Markets 3.2 Electronic Markets 3.3 Usage of Electronic Markets 3.4 Advantages and disadvantages 3.5 Future of Electronic Markets	5
4.	Inter organizational Ecommerce 4.1 Inter organizational transactions 4.2 purchasing Online 4.3 After Sales online 4.4 E-commerce in desktop facilities management 4.5 Pens and things and the web	5
	Business to Consumer(B2c) Electronic Commerce	
5.	Consumer trade transactions 5.1 What you want, when you want it 5.2 Internet E-commerce 5.3 The E-shop 5.4 Internet Shopping and the trade cycle 5.5 Advantages and disadvantages of consumer e-commerce	6

6.	The elements of e-commerce 6.1 Elements 6.2 E-visibility 6.3 the e-shop 6.4 Online payments 6.5 Delivering the goods 6.6 After-sales service 6.7 Internet E-commerce security	7
7.	E-Business 7.1 Introduction 7.2 Internet books shop 7.3 Grocery supplies 7.4 Software supplies and support 7.5 Electronic Newspapers 7.6 Internet banking 7.7 Virtual Auctions 7.8 Online share dealing 7.9 e-diversity	8
Total		40

Recommended Books	
1.	E-commerce, Strategy, Technologies and applications by David Whiteley, Tata McGraw-Hill Edition
2.	E-Commerce Concepts, Models , Strategies by - G.S.V Murthy

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Semester-III

Subject Name -: DBMS (Database Management System)

Subject Code -: 302

Objectives -:

1. To know principles of databases
2. To know database management operations

Unit No.	Topic	Periods
1.	1. Database Management System <ul style="list-style-type: none">• Database System Application• Database System Vs File System• View Of Data• Data Models• Database Languages• Database Users And Administration• Transaction Management• Database System Structure• Application Architecture• History Of Database System	8
2.	Entity Relationship model <ul style="list-style-type: none">• Basic Concepts• Constraints,• Keys,• Design Issues• E-R Diagram• Weak Entity Sets• Extended E-R Features	8
3.	Relational model <ul style="list-style-type: none">• Structure Of Relational Database• Views	2

4.	<p>SQL</p> <ul style="list-style-type: none"> • Background • Basic Structure • Set Operations • Aggregate Functions • Null Values • Nested Subqueries • Views • Complex Queries • Modification Of Database • Joined Relations • DDL, Embedded SQL • Other SQL Features • Query By Example • Datalog • User interfaces And Tools • Integrity And Security Constraints • Referential Integrity • Assertions • Triggers • Security And Authorization • Authorization In SQL • Encryption And Authentication 	12
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5.	<p>Relational Database design</p> <ul style="list-style-type: none"> • First Normal Form • Pitfalls In RDB Design • Functional Dependencies • Decomposition • Desirable Properties Of Decomposition • Boyce-Codd Normal Form, • Third, Fourth Normal Form • More Normal Form • Overall Database Design Process • Query Processing Overview • Measures Of Query Cost Selection Operation • Query Optimization 	8
6.	<p>Transactions [6 Lectures</p> <ul style="list-style-type: none"> • Transaction Concepts • Transaction State, • Implementation Of Atomicity And Durability • Concurrent Executions • Serilizability • Recoverability • Implementation Of Isolation, Transaction Definition In Sql. 	6
7.	<p>Concurrency control</p> <ul style="list-style-type: none"> • lock-based protocols • timestamp-based protocols • validation based protocols • multiple granularity • deadlock handling • insert, delete operation • weak level of consistency 	4
Total		48

Recommended Books	
1.	Database System By Korth TMH
2.	Fundamentals of Database System by Navathe

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Semester III

Subject Name :- E-Banking and financial Services

Course Code :- 303

Objectives :-

1. To develop right understanding about banking in changing scenario.
2. To develop right understanding implication of changing technology.

Unit No.	Topic	Periods
1.	Anatomy of banking in India Concepts Definitions Types of banks Functions of banks Emergence of technology and its implications on banking new trends in Banking services	8
2.	Electronic Banking Concepts Types Applications Role Banking sector and Information technology Payments and settlement system RTGS and clearing houses	10
3.	Service quality in E - Banks Service design Delivery Strategy Facility Management Security challenges in e-banking services	10
4.	Internet banking Industry in India Domestic development in Indian Banking system IT Acts – 2000 Data communication network and eft system Components of data communication networks Tram mission devices interface equipments and major networks used in India for banking	10
5.	Technology up gradation an development – Global trends – Impact of IT : on HR on Customers- Privacy and confidentiality – Risks involve in computerized environment – Threats and damages – Control mechanism – computer system audit –system security – legal framework of electronic objectives: The objectives is to enable students to gain advanced knowledge of business practices and operations in emerging sectors viz Retailing, Logistics, Services and Agribusiness. The students are respected to gain better insight and understanding of career opportunities available as commercial professionals in these core Sectors.	10
Total		48

Recommended Books
<ol style="list-style-type: none">1. ahluwalia monkek singh : “ Reforming Indias Financial Sectors in Banking System”, oup, newdelhi.2. Basch Antonian : Financing economic development in Indian Banking system new york 19643. choudhari, parmeet : Indian Banking Industry : poverty and development, new york saint martin press 1979

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Semester III

Subject Name :- Management Control System

Course Code :- 304

Objective :-

1. To familiarize the students with the control function of management, nature of control and techniques of control.

Unit No.	Topic	Periods
1.	INTRODUCTION TO MANAGEMENT CONTROL SYSTEM THE CONTROL FUNCTION The control function – Control and Supervision – Control as Function – Definition of Control – Elements of Control – Nature of Control THE NATURE OF MANAGEMENT CONTROL Definition of Management Control – Management Control and Planning – Control Factors Affecting Managerial Philosophy. MANAGEMENT CONTROL SYSTEM Meaning and Designs- Management Control Systems	8
2.	INFORMATION THEORY Meaning of Information – Types of Information – Accounting Information – Operating Information – User oriented MIS INSTALLATION OF MANAGEMENT INFORMATION AND CONTROL SYSTEM Management Information and Control System – Installation Committee – Policies and Decision Rules STRUCTURED AND UNSTRUCTURED DECISION : IMPLICATION OF CONTROL Nature of Decision Making – Functional Structure – Divisional Structure Net Work Coupling Structure	10
3.	PROPERTY AUDIT MANAGEMENT AUDIT Property Audit- Audit of Financial Property under Government Audit Management Audit Methodology and Reports MANAGEMENT CONTROLS IN FUNCTIONAL AREAS PRODUCTION CONTROL Need for Production Control – Difference Between Production Planning and Production Control INVENTORY CONTROL Classification of Inventories – Motives for Holding Inventories –Inventory Control Department – Determination of Stock Levels. MARKETING CONTROL Definition of Marketing Control –Process of Marketing Control – Importance of Marketing Control System – Tools and Techniques of Marketing Control CONTROL IN PERSONNEL AREA Reasons for Workers Resistance to Controls – Kind of Control Devices – Reports and Budget	12

4.	<p>COMPUTER SYSTEMS : DECISION SUPPORT SYSTEMS Computer for Management Control Purposes- Are computers essential for MIS ? Computers and Information Systems – Manual Systems = Mechanical Systems – MIS – Decision Support Systems – Characteristics of DSS- where to Apply DSS – Experts Systems MANAGEMENT CONTROL OF PROJECTS Meaning of Project – Overall Nature of the Problem – Aspects of Control – Project Planning – Time Dimension – Cost Dimension- Quality Dimension – Project Control – Reports Costs and Time Reports Costs and Time – Reports on Output – Revisions.</p>	8
5.	<p>Mathematical Models Concept of Mathematical Models – Quantitative Models – Formulations of a Mathematical Model – Concept of Operation Research – Model and Decision Making Process – O. R. Techniques –Linear Programming NETWORK TECHNIQUES : PERT & CPM Objective of Network Analysis – Managerial Applications of Network Analysis – Construction of Network Diagram QUEUING THEORY , GAME THEORY AND SIMULATION Queuing or waiting Line Theory – Terms Commonly used in Queuing Theory – Elements of Queuing Systems – Assumptions of Queuing Theory – Types of Queuing Theory – Decision Theory – Game Theory – Rules of Game – the Two Persons Zero Sum Games – Simulation Analysis.</p>	10
Total		48

Recommended Books
<ol style="list-style-type: none"> 1. Anthony R. N. and John Dearden : Management Control Systems. 2. Bhadada B.M. : Management Control System. 3. Bhattacharya S.K. : Managerial Planning & Control Systems. 4. Mark G. Simin : Computer Information Systems for Business. 5. Robert J. Mockler : Readings in Management Control Systems. 6. Subhash Sharma : Management Control Systems.

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Semester III

Subject Name :- Netiquettes and Cyber Security

Course Code :- 305

Objectives :-

1. To understand the concept of cyber security.
2. To learn commercial services.

Unit No.	Topic	Periods
1.	Network Basics Domains Internet Numbers Resolving Names and Numbers The Networks The Physical Connection	6
2.	Electronic Mail Email Addresses % @ !.: Symbolic Cacophony Sending and Receiving Mail Anatomy of a Mail Header Bounced Mail	5
3.	Usenet News What Usenet Is The Diversity of Usenet What Usenet Is Not Propagation of News Group Creation If You're Unhappy... The History of Usenet (The ABCs) Hierarchies Moderated vs Unmoderated news.groups & news.announce.newgroups How Usenet Works Mail Gateways Usenet ``Netiquette" <ul style="list-style-type: none">▪ Signatures▪ Posting Personal Messages▪ Posting Mail▪ Test Messages▪ Famous People Appearing▪ Summaries▪ Quoting▪ Crossposting▪ Recent News▪ Quality of Postings▪ Useful Subjects▪ Tone of Voice	10

	<ul style="list-style-type: none"> ▪ Computer Religion Frequently Asked Questions The Pit-Manager Archive	
4.	Telnet Using Telnet Telnet Ports Publicly Accessible Libraries The Cleveland Freenet Directories Knowbot White Pages	6
5.	Various Tools Finger Ping Talk The WHOIS Database Other Uses of WHOIS	7
6.	Commercial Services Electronic Journals Commercial Databases Clarinet News	6
Total		40

Recommended Books	
1.	Stealing the Network: How to Own a Continent (Cyber-Fiction) by Ryan Russell
2.	Network Security Assessment: Know Your Network by Chris McNab
3.	Cyber Security - Edward Amoroso

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Semester III

Subject Name :- M-Commerce Technology and WAP Architecture (CA)

Subject Code :- 306

Objectives :-

1. To understand the technology of M-Commerce
2. To learn WAP Architecture

Unit No.	Topics	Periods
1.	Introduction to m-commerce 1.1 emerging applications 1.2 wireless service providers 1.3 middleware & wireless infrastructure 1.4 different players in m-commerce, and m-commerce life cycle	5
2.	Requirements and multi-layer frameworks 2.1 wireless and networking requirements 2.2 quality of service 2.3 location-management 2.4 security, dependability	5
3.	Mobile Services 3.1 Mobile financial services, 3.2 Mobile entertainment services, 3.3 Proactive service management (service details and usage scenarios)	4
4.	Location-based m-commerce services: part I 4.1 location, context and user-oriented services 4.2 location management in heterogeneous wireless and mobile networks	6
5.	Location-based m-commerce services: part II 5.1 push/pull services 5.2 Role of middleware in location-based services 5.3 Location-enabled devices	6
6.	Group-oriented mobile commerce services: 6.1 mobile auctions 6.2 mobile entertainment services, multi-party games	4
7.	Wireless Application Protocol 7.1 History Wireless Application Protocol (WAP) 7.2 WAP Architecture Components 7.3 The WWW Model 7.4 Wireless Session Protocol Specification 7.5 Wireless Datagram Protocol Specification	5
8.	Bluetooth 8.1 Design and Principles of Operation 8.2 Bluetooth Security 8.3 Link Manager Protocol	6

	8.4 Logical Link Control and adaptation 8.5 Alternatives to Bluetooth 8.6 Future of Bluetooth	
9.	Global Positioning System 9.1 Design and Principles of Operation 9.2 Layers of the Atmosphere 9.3 Differential GPS	4
	Total	45

Recommended Books	
1.	Mobile Commerce: Technology, Theory and Applications by Brian Mennecke and Troy J. Strader, Idea Group Publishing
2.	Mobile Commerce and Applications, Upkar Varshney, A tutorial at IEEE International Conference on Wireless Communications (WCNC)
3.	Mobile Commerce: Frameworks, Applications and Networking Support, ACM/Kluwer Journal on Mobile Networks and Applications (MONET), June 2002 (Upkar Varshney and Ron Vetter)

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Semester IV

Subject Name :- Case Studies in E-Commerce & M-Commerce

Subject Code :- 401

Objective / Objectives :-

3. To understand the technology of E-Commerce
4. To understand the technology of M-Commerce

Unit No.	Topics
1.	<p>Music Aggregation and Download Service Music File type, Download services, Player support, Payment</p> <p>Auction and Reverse Auction Web and Mobile Solution Process, authentication, procurement</p> <p>Online Advertising Significance, trust on product, Brand building, Pay per click advertising, Search Engine Optimization, Mobile Advertising, pop-up / pop-under ads, search engine advertising</p> <p>E-Governance in Maharashtra Significance, users, grievances registration, solution to the problem through net(like marriage certificate)</p> <p>On line share trading Feasibility in Indian scenario, usage, advantage, disadvantages, payment</p> <p>Social networking Twitter case study The case should illustrates some of the challenges for an owner of a social network managing growth and decline in usage. It also highlights the challenges for partners and advertisers considering working with a social network and privacy of information.</p> <p>Fraud in e-commerce(example way2life.com) Authentication of information on net, identity theft, types of fraud on net, preventions</p> <p>e-commerce/m-commerce revenue model Payment mode, verification, merchant bankers, Plastic money, actual payment</p> <p>case studies highlight issues relating to mobile commerce in INDIA. The issues include: the need for a clear business case; difficulty of achieving critical mass and acceptance of a new service; training and technical issues, as well as staff acceptance issues;</p>

	<p>that privacy and security difficulties in integrating with existing back-end systems; projects being affected by changes to legislation, or requiring changes to the law; mobile phone operators to develop new billing methods that become new models for issuing credit, they are not covered by existing credit laws. Note : Students must study the life cycle of E-Commerce and M-Commerce</p>
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Semester IV
Subject Name :- Internet And Web Designing
Course Code :-402

Objective :-

1. To know & understand concepts of internet programming.

Unit No.	Topic	Periods
1.	HTML 1.1 Introduction to HTML, WWW and WC 1.2 Basic HTML Structure 1.3 Common HTML Tag 1.4 Physical and Logical HTML 1.5 Types of Images, Image mapping 1.6 List, Table, Frames 1.7 Embedding Audio, Video 1.8 HTML form and form elements	7
2.	CSS(Cascading Style Sheet) 2.1 Introduction to style sheet 2.2 Style sheet property 2.3 Positioning with style sheet	5
3.	VB Script 3.1 Introduction to VB Script 3.2 Identifier & operator, control structure, functions 3.3 Predefined functions, numbers & string functions 3.4 User defined functions 3.5 Array in VB scripts 3.6 Event handling in Java script	8
4.	Active Server Pages (ASP) 4.1 HTTP basic 4.2 Introduction to ASP 4.3 Working with personal web server & IIS 4.4 Writing simple ASP pages, 4.5 Request & Response object 4.6 Application and session object. 4.7 global.asa 4.1 ASP & database 4.2 Error handling	8
Total		45

Recommended Books
<ol style="list-style-type: none"> 1. Active Server pages 3.0 in 21 days - by Techmedia 2. Complete HTML - Thomas Powell 3. HTML and JavaScript – Ivan Bayross

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Semester IV

Subject Name :- Accounting Information System

Course Code :- 403

Objective :-

1. To acquaint the student with accounting information system knowledge required to be incorporated in computer based accounting system.

Unit No.	Topic	Periods
1.	Course inputs: Accounting and system concept :A model for processing accounting information; Managerial accounting systems; financial reporting and responsibility accounting; system approach and accounting sub –system; System tools flow charting, entity relationship diagram, data flow diagram, structured charts and decision tables, project management tools.	08
2.	Developing Accounting Systems : Qualities of successful accounting system; System Development life Cycle (SDLC), Rapid Application Development (RAD); Object Oriented Development (OOD); Auditors involvement in System design; Systems analysis; Determining economic feasibility; requirement analysis; System specification and design implementation and review.	08
3.	Technology : Hardware and Software requirement; Database management organization.	08
4.	Control : Control environment :Risk assessment ; Monitoring ;illegal /corrupt practices and control Mechanisms ;security of data ;integrity and access control ;data centre operation control and application control ;Evaluating and auditors responsibility	08
5.	Processing Accounting Transaction :Accounting transactions cycle ; Economic events ; Revenue cycle application documents ,records and reports ;Expenditure cycle application ;/ conversion cycle application inventory system transaction ,cost accounting transactions and reports ,payroll transactions , non accounting applications(PPC,MRP,JIT system);Financial cycle applications control for debt equity transaction ,property systems transactions ,journal entry and financial reporting systems, recording depreciation, responsibility accounting.	08
6	Accounting of Dotcom Companies: Guidelines of institute of chartered Accountants of India and securities Exchange Board of India(SEBI).	08
Total		48

Recommended Books

1. J .L. Bookckholdt,Accounting Information system,Irwin,Illinois.
2. W.M.Liao and J.L. Bookckholdt,cost Accounting for Managerial Planning ,decision making and control, Houston: Dame.
3. H .M. Sollenberger,Management control of information system development, Montvale Institute of Management of Accountants ,New jersey.

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Semester IV

Subject Name :- E- marketing & Customer Relationship Management

Course Code :- 404

Objective :-

1. To develop understanding about the contemporary trends in electronic marketing .
2. To create awareness as to role information technology in the tread marketing

Unit No.	Topic	Periods
1.	Functional areas of business – competition –Environmental scanning – Business strategies –history of money ,Gold standard to paper currency to digital money – Digital velocity –change in thinking in marketing Management – insights into E-Business –change in supply chain –status of E-Business in China ,Japan and India – Internet Marketing Techniques –E- business Aptitude Quiz – web Competition –E-Services – Internet Business,B2B,B2C- Japan ,Italy,- Business Models, Limitation – ABC of E-Business Electronic marketing.	12
2.	Types of e-marketing - Telephone ,voice mail System ,Routing Business ,Fax , Video, Television Sky Shops ,CDs, Modern, Bulletin Board System ,E-mail, Electronic Data Interchange.	10
3.	E –Marketing Traditional Marketing Identifying web Presence Goals Achieving web presence Goals The Uniqueness of the web Meeting the needs of Website visitors E-Marketing value Chain Site Adhesion :content ,format , Access Maintaining a Website Metrics Defining Internet Units of Measurement The Browsing Behavior Model Browsing Behavior Model of on online Video Store Aggregate Metrics for E-business sites Online Marketing How should buyer pay online Advantages of Online Marketing Various Business that can Flourish on the internet	16
4.	e- Advertising various Means of Advertising conducting online Market Research Building Customer Relationship Based on One –To-One Marketing Market Segmentation Data Mining and Marketing Research Intelligent Agents in Marketing and Customer –Related Application	10

	Measuring the Effectiveness of E-Advertising Internet Marketing Trends Technology –enable Relationship Management Target Markets Product Considerations E-Branding Elements of Branding Spiral Branding Marketing Strategies Permission – marketing strategies Brand-leveraging strategies Affiliate – marketing strategies Viral – marketing strategies Website Naming Issue Advertising - supported Model Marketing strategy on the Web	
5.	Customer Relationship Management Backdrop-Definition –creating Awareness –customer service Introduction – customer care –philosophy ,policy and steps of implements –creation of information Centre -Customer care Data –Learning –Study of Demography-Learning for Organizations –Learning about customers –case studies - KAO Corporation , Japan –Buck man Laboratories Inc-New Zealand’s Institute of Environment. Science &Research –Learning Coach network – customer –vision – customer Relationship Management ,Initiatives/steps / Implementation	10
Total		48

Recommended Books

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Semester IV

Subject Name :- Network infrastructure and e-payments

Course Code :- 405

Objectives :-

1. To know about network infrastructure
2. To know different e-payment systems

Unit No.	Topic	Periods
1	Network Infrastructure 1.1 What Is A Network, 1.2 International organization for standard's (ISO)model, 1.3 Internet layers- TCP/IP stack, 1.4 Classes of IP address, 1.5 Domain name system, 1.6 Getting domain names and IP addresses,	4
2	Networking Devices 2.1 Hubs, Repeaters, Bridges, Switches, Routers, Cabling options, 2.2 Address resolution protocols (ARP) and address resolution protocol (RARP), 2.3 File transfer Protocol (FTP), 2.4 FTP Structure, 2.5 Connection methods, Ftp Session, Commands, Common Reply Codes, 2.6 Introduction to Electronic Mail, WWW - The World Wide Web.	8
3	Network Infrastructure for e-commerce 3.1 Intranet, Extranet, & Internet, 3.2 Internet Backbone in India, 3.3 ISP and services in India, OSI Model, 3.4 Standards & Overview of TCP/IP, 3.5 Internet Security, 3.6 e-commerce & Internet.	6
4	Electronic Payment Systems 4.1 Introduction to Payment Systems, 4.2 Electronic Payment Systems 4.2.1 ATMs 4.2.2 HWAK (The Intelligent Auto Teller and Netware Management System) 4.2.3 On-Line Payment Systems, 4.2.4 Pre-Paid e-Payment System, 4.2.5 Post-Paid e-Payment System, 4.3 Requirements Metrics of a Payment System. 4.4 Personal Identification Number (PIN)	6
5	Protocols 5.1 Secure Sockets Layer (SSL), 5.2 Secure Electronic Transactions(SET).	2

6	Electro-Magnetic Cards 6.1 Credit Cards 6.2 Debit Cards 6.3 Smart Cards 6.4 Multiple PIN 6.5 Electronic Purse 6.6 Bank Card 6.7 Electronic Cheque 6.8 Electronic Cash 6.9 Electronic Token 6.10 Corporate Cash Management Services	8
7	Electronic Banking 7.1 Anytime Banking 7.2 Anywhere Banking 7.3 Home Banking (Corporate and Personal) 7.4 Internet Banking 7.5 Mobile Banking 7.6 Electronic Commerce (e-Commerce)	6
Total		40

Recommended Books	
1.	Kamalesh K Bajaj & Debjani Nag: E-Commerce, the Cutting Edge of Business- Tata McGraw-Hill, New Delhi, 2002.
2.	C.S.V.Murthy: E-Commerce-Concepts, Models & Strategies, Himalaya Publishing house, Mumbai, 2003.
3.	Bharat Bhaskar: Electronic Commerce,Tata Mc-Graw-Hill, New Delhi, 2003.
4.	Elias M.Awad: Electronic Commerce, Prentice-Hall India, New Delhi,.2002.
5.	Perry: E-Commerce, Thomson Publications, New Delhi,2003.
6.	TCP/IP : Behrouz A. Forouzan

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Semester IV

Subject Name :- Business Research & Analytics

Course Code :- 406

Objective :-

1. To enhance knowledge and understanding of learners towards 'age of analytics as a way of activities necessary for success in a knowledge economy.
2. To help to identify and to create situation by students to use and to study application of analytics and measurement tools.

CM-2.2 (Background of statistical techniques and internet essential)

Unit No.	Topic	Periods
1.	Conceptual understanding of terms: Business intelligence, Business Analytics,	10
2.	Characteristics and application statistical decision theory – Game theory – PERT Queuing theory – Simulation Probabilistic inventory models. Tools techniques and metrics used in business for measurement evaluation and revalidation.	14
3.	Introduction to research Methodology, Nature Scope & Objective; type of research in social science and business; validity and reliability in research. Research design; features of a good design; types of design; research process and research proposal.	10
4.	Data Collection; Types of Method of data collection; designing of questionnaire ; Characteristics of a good questionnaire; interview techniques; interview techniques; Survey methods; optimal techniques.	7
5.	Presenting Report: Steps in report writing; Format of report writing, Characteristics of a good report; Layout of a research paper.	14
Total		48

Recommended Books

1. Competing on Analytics:
The new science of winning – Davenport Thomas H. Harvard Business School Press(2007).
2. Introduction to Business Data Mining David Olson, Young Shi McGraw Hill- 2005 Quality Management.
3. Howard Gitlow, Alan Oppenheim McGraw Hill – 2005.
4. Statistical Quality Control
Eugene Grant McGraw Hill – 2000.
5. Measuring Business Performance Economist (2006).
6. Introduction to Operation Research Gillett – McGraw Hill 2007 SIM.CRM(Manual) Tata . McGraw Hill – 2003
7. Managerial Spread Modeling & Analysis Rick Hesse McGraw Hill (1997)