

Dr.MGR
Educational and Research Institute
UNIVERSITY
B.Tech IT and Business Computing (Full Time) Curriculum and Syllabus
Admission Year 2013 - 14 onwards

Tentative Sub Code	COURSE TITLE	L	T	P	C
SEMESTER – III					
THEORY					
BBC111	Object Oriented Programming	3	1	0	4
BIT 003	Computer Architecture	3	0	0	3
BCS 002	Data Structures & Algorithms	3	1	0	4
BBC 001	Management Accounting	3	0	0	3
BMA 777	Business Mathematics	3	1	0	4
BBC 002	Structured System Analysis and Design	3	0	0	3
PRACTICAL					
BIT L01	DS & OOPS Lab	0	0	3	1
BBC L01	Computer Applications Lab	0	0	3	1

Subtotal : 23

Tentative Sub Code	COURSE TITLE	L	T	P	C
SEMESTER – IV					
THEORY					
BIT 002	Database Management Systems	3	0	0	3
BIT 242	System Programming and Operating Systems	3	0	0	3
BIT 004	Java Programming	3	1	0	4
BBC 003	Microeconomic Principles	3	0	0	3
BBC 004	Operations Management	3	1	0	4
BIT 481	Enterprise Resource Planning	3	0	0	3
PRACTICAL					
BIT L02	Java & DBMS LAB	0	0	3	1
BBC L02	ERP LAB	0	0	3	1
BBC L11	INTERNSHIP-I	0	0	1	1

Subtotal : 23

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Tentative Sub Code	COURSE TITLE	L	T	P	C
SEMESTER – V					
THEORY					
BIT 005	Visual Programming	3	0	0	3
BIT 006	Object Oriented Analysis & Design	3	0	0	3
BIT 351	User Interface Design	3	0	0	3
BBC 005	Macroeconomic Principles	3	1	0	4
BBC 006	International Business Strategy	3	0	0	3
BBC 007	Financial Management	3	0	0	3
	PRACTICAL				
BIT L03	Case Tools lab	0	0	3	1
BBCL03	Business Process Tools Development Lab	0	0	3	1

Subtotal : 21

Tentative Sub Code	COURSE TITLE	L	T	P	C
SEMESTER – VI					
THEORY					
BIT 362	Component Based Technology	3	0	0	3
BIT 363	Dot Net	3	1	0	4
BCS 407	Data mining & Warehousing	3	0	0	3
BBC 008	Banking & Insurance Process	3	0	0	3
BCS ED1	Decision Support Systems	3	1	0	4
BBC E6	Elective – I	3	0	0	3
	PRACTICAL				
BIT 366	Software Component & .NET Lab	0	0	3	1
BBCL04	Financial Management Tools Lab(Oracle Financial)	0	0	3	1
BBC L12	INTERNSHIP-II	0	0	1	1

SUBTOTAL:23

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Tentative Sub Code	COURSE TITLE	L	T	P	C
SEMESTER – VII					
THEORY					
BIT 471	E-Commerce	3	0	0	3
BIT 472	Web Technology & Web Services	3	1	0	4
BIT 007	Computer Networks	3	0	0	3
BCS 309	Software Engineering	3	0	0	3
BIT XX1	Computational Intelligence Tools	3	0	0	3
BBC E7	<i>Elective II</i>	3	0	0	3
PRACTICAL					
BIT 476	Web Services & E-Commerce Lab	0	0	3	1
BBC L04	Business Intelligence lab(COGNOS,SSIS,SSAS,SSRS)	0	0	3	1
BIT 478	Project – Phase I	0	0	3	1

SUBTOTAL : 22

Tentative Sub Code	COURSE TITLE	L	T	P	C
SEMESTER – VIII					
THEORY					
BBC 009	Portfolio management	3	0	0	3
BCS 409	Information Storage Management	3	1	0	4
BBC E8	<i>Elective III</i>	3	0	0	3
BIT 482	Project-Phase II	0	0	3	13

SUBTOTAL: 23

I year :45 credits

IIyear(23+23) :46 credits

IIIyear(21+23) :44 credits

IVyear(22+23) :45 credits

GRAND TOTAL : 180 CREDITS

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LIST OF ELECTIVES – I COURSE TITLE(VI SEM)

BBC E61	Professional Ethics	3	0	0	3
BIT 473/ BBC E 62	Wireless and mobile computing	3	0	0	3
BBC E63	Business Information System	3	0	0	3
BBC E64	Tax Management	3	0	0	3
BCS ED5 /BBC E65	Total Quality Management	3	0	0	3
BBC E66	Special Elective-I	3	0	0	3

LIST OF ELECTIVES – II COURSE TITLE (VIISEM)

BBC E71	Operations Research	3	0	0	3
BBC E72	Information security	3	0	0	3
BBC E73/ BCS E43	ECRM	3	0	0	3
BBC E74	M - Commerce	3	0	0	3
BCSED2/ BBC E75	Management Information System	3	0	0	3
BBC E76	Special elective-II	3	0	0	3

LIST OF ELECTIVES – IIICOURSE TITLE(VIII SEM)

BBC E81 BCS E45	Service Oriented Architecture	3	0	0	3
BBC E82/ BIT E85	Knowledge Management	3	0	0	3
BBC E83	Supply Chain Management	3	0	0	3
BBC E84/ BIT E86	Cloud Computing	3	0	0	3
BBC E85/ BIT 475	Software Project Management	3	0	0	3
BBC E86	Special Elective-III	3	0	0	3

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SEMESTER – III

BBC 111	OBJECT ORIENTED PROGRAMMING	3	1	0	4
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UNIT– I 9 hrs
Identifiers, Keywords, Constants, C++ Operators, Statements, Manipulator Functions, Control & Loop Statements, Functions and Program Structures, Recursive Functions, Pre-processors, Header Files, Standard Functions, Multi Function Program, Conditional Compilation.

UNIT– II 9 hrs
Arrays, Multidimensional Arrays, Character Arrays, Pointer Arithmetic, Array of Pointers, Pointers to Pointers, Array of Structures, Nested Structure, Unions, Bit Fields, Enumerators.

UNIT – III 9 hrs
Classes, Objects, Structures, Declaration of Class, Member Functions, Pointers, Unions, Nested Class, Copy and Default Constructors, Destructors, Inline Member Functions, Static Class members, Friend functions, Inheritance, Ambiguity in Single Inheritance, Multiple Inheritance Container Classes, Member Access Control

UNIT – IV 9 hrs
Function Overloading Operators Overloading, Overloading of Binary Operators, Overloading of Unary Operators, Polymorphism with Pointers, Virtual Functions, Late Binding, Abstract Base Classes, Constructors under Inheritance, Destructors under Inheritance, Virtual Destructors, Virtual Base Classes.

UNIT – V 9 hrs
Function Template, Class Template, Exception Handling, Opening and Closing of Files, Binary File Operations, Random Access File Processing, Various Turbo C++ and Borland C++ Streams and File Processing Commands

TOTAL: 45 HOURS

TEXT BOOKS:

1. Balaguruswamy.E “object Oriented Programming with c++” Tata McGraw- Hill ,Second Edition,2007.
2. Gary J. Bronson, “Object oriented program development using Java, Thomson Learning 2005.

REFERENCES:

1. Deitel and Deitel, “ C++ How to Program” Prentice Hall, 2008.
2. N.Barkakati, “Object Oriented Programming in C++”, Prentice Hall of India Pvt.Ltd,2005.

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BIT 003	COMPUTER ARCHITECTURE	3	0	0	3
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UNIT 1 INTRODUCTION 9 hrs

Basic structure of Computer Hardware-Von-Neumann Architecture-Functional units-Instruction formats and types-Addressing modes. RISC Vs CISC

UNIT II ARITHMETIC AND LOGIC UNIT 9 hrs

Fixed point arithmetic operation-addition, subtraction, multiplication, division-Floating point arithmetic operation-Design of ALU-Bit-slice processors.

UNIT III PROCESSOR UNIT 9 hrs

Data path implementation-Control unit-hardwired control, micro programmed control, nanoprogramming- Concepts of pipelining. Pipeline hazards

UNIT IV MEMORY SYSTEM 9 hrs

Memory hierarchy-Internal organization of RAM, ROM, Interleaved memory-Cache and associative memories-Virtual memory.Memory organization and cache coherence issues

UNIT V INPUT/OUTPUT AND PERIPHERALS 9 hrs

Basic concepts-programmed I/O-Interrupts and DMA-I/O processors-input devices-display devices-printers magnetic disk drives-optical drives. SCSI

TOTAL: 45 HOURS

TEXT BOOKS:

1. Hayes," Computer Architecture and Organization",Tata McGraw Hill,2004
2. Hennessey & Patterson, "Computer Architecture A Quantitative Approach", Harcourt Asia, Morgan Kaufmann, 3rd Edition 2005

REFERENCES:

1. Heuring V.P., Jordan H.F., "Computer System Design and Architecture", Addison Wesley,2004.
2. Carl Hamacher V., Zvonko G.Vranesic, Safwat G. Zaky, "Computer organization", Tata McGraw Hill, Fifth Edition, 2006.
3. Morris Mano,"Computer System Architecture", PHI- 3rd Edition, 2004

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BCS 002	DATA STRUCTURES AND ALGORITHMS	3	1	0	4
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UNIT I LINEAR DATA STRUCTURES 9 hrs
Stacks, Queues & Lists Implementation and Applications, Singly linked list-Doubly linkedlists.

UNIT II NONLINEAR DATA STRUCTURES 9 hrs
Trees – Binary Trees – Binary Search Tree – Tree Traversals – AVL Trees

UNIT III ALGORITHM ANALYSIS 9 hrs
Sorting and searching –space complexity-time complexity-Big Oh-Binary Searchinganalysis-Quick sort-Heap sort-Merge sort-Analysis

UNIT IV GRAPH ALGORITHMS 9 hrs
Graph operations-DFS-BFS-Minimum cost spanning tree-Krushkal's algorithm-Prim'sAlgorithm

UNIT V ALGORITHM DESIGN METHODS 9 hrs
Greedy method – Shortest path – Divide and Conquer –Matrix multiplication-Dynamic programming-Back tracking –Traveling Sales person problem.

TOTAL: 45 HOURS

TEXT BOOK:

1. E. Horowitz, S. Sahani& Mehta, "Fundamentals of Data Structures in C++", Galgotia, 2007.

REFERENCES :

- 1) Weiss Mark Allen, "Data Structures and Algorithm Analysis in C", Pearson Education, 3/e2004.
- 2) E.Horowitz, Sahni&SanguthevarRajasekaran, "Fundamentals of Computer Algorithms",Galgotia Publications, 2004
- 3) Jean - Paul Tremblay, Paul G . Sorenson , "An Introduction to Data Structures withApplications", Tata McGraw-Hill, 2nd Edition, (2007)
- 4) Sara Baase& Allen Van Gelder, "Computer Algorithms" Galgotia, 2005.

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BBC 001	MANAGEMENT ACCOUNTING	3	0	0	3
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UNIT I 9hrs.
Management Accounting - Meaning and purpose. Financial accounting - Preparation of Trading Account, Profit and loss account and Balance Sheet - Limitations of Financial Statements.

UNIT II 9 hrs.
Ratio analysis - Uses and Limitations, Inter - firm and Intra - firm comparison.

UNIT III 9hrs.
Budgetary control - Nature and Objectives of budgetary control - Limitations; Types of budgets, Fixed and flexible budgets; Zero Base budgeting.

UNIT IV 9 hrs.
Marginal costing - Cost volume profit analysis - Break even point, Direct costing Vs Absorption costing. Capital budgeting decisions, methods of evaluating long term investments - Payback period, Accounting Rate of Return, NPV, IRR and Profitability Index.

UNIT V 9 hrs.
Fund Flow statement and Cash Flow statement.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Dr. Maheswari.S.N., "Management Accounting", 5th Edition, Sultan Chand & Sons, 2007.
2. Khan.M.Y. and Jain.P.K, "Management Accounting, 4th Edition, Tata McGraw Hill, 2006.

REFERENCES:

1. Pandey.I.M., "Management Accounting", 3rd Edition, Vikas Publications, 2009.
2. Reddy.T.S. & Hari Prasad Reddy, "Financial and Management Accounting", 3rd Edition, Margam Publication, 2008.

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BMA 777	BUSINESS MATHEMATICS	3	1	0	4
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UNIT 1. RATIO, PROPORTION AND PERCENTAGE

9 hrs

Ratio- Definition, Continued Ratio, Inverse Ratio, Proportion, Continued Proportion, Direct Proportion, Inverse Proportion, Variation, Inverse Variation, Joint Variation, Percentage Meaning and Computations of Percentages.

UNIT 2. PROFIT, LOSS AND INTEREST

9 hrs

Terms and Formulae, Trade discount, Cash discount, Problems involving cost price, Selling Price, Trade discount and Cash Discount. Introduction to Commission and brokerage, Problems on Commission and brokerage Simple Interest, Compound interest (reducing balance & Flat Interest rate of interest), Equated Monthly Installments(EMI), Problems

UNIT 3. SHARES AND DIVIDENDS

9 hrs

Concept of Shares, Stock exchange, Face Value, Market Value, Dividend, Equity Shares, Preferential Shares, Bonus Shares, Examples.

UNIT 4. MATRICES AND DETERMINANTS (UPTO ORDER 3 ONLY):

9 hrs

Multivariable data, Definition of a Matrix, Types of Matrices, Algebra of Matrices, Determinants, Adjoint of a Matrix, Inverse of a Matrix via adjoint Matrix, Homogeneous System of Linear equations, Condition for Uniqueness for the homogeneous system, Solution of Non-homogeneous System of Linear equations (not more than three variables). Condition for existence and uniqueness of solution, Solution using inverse of the coefficient matrix, Problems.

UNIT 5. PERMUTATIONS AND COMBINATIONS:

9 hrs

Permutations of 'n' dissimilar objects taken 'r' at a time (with or without repetition). $nPr = \frac{n!}{(n-r)!}$ (without proof). Combinations of 'r' objects taken from 'n' objects. $nCr = \frac{n!}{r!(n-r)!}$ (without proof) problems, Applications.

TOTAL: 45 HOURS

TEXT BOOKS:

- 1) "Business Mathematics" by Dr. Amarnath Dikshit & Dr. Jinendra Kumar Jain, 2005.
- 2) "Business Mathematics" by V. K. Kapoor - Sultan chand & sons, Delhi, 2004

REFERENCES

- 1) "Business Mathematics" by Bari - New Literature publishing company, Mumbai, 2006

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BBC 002	STRUCTURED SYSTEM ANALYSIS AND DESIGN	3	0	0	3
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UNIT-I. 9 hrs

System Definition and concepts: General Theory systems, Manual and automated systems, Real-life Business Sub-Systems. System Environments and Boundaries. Real-time and distributed systems. Basic principles of successful systems. Approach to system development: Structured System Analysis and Design, Prototype, Joint Application Development. Role and Need of Systems Analyst. Qualifications and responsibilities. System Analysis as a Profession.

UNIT-II 9 hrs

System Development Cycle Introduction to Systems Development Life Cycle (SDLC). Various phases of SDLC: Study, Analysis, Design, Development, Implementation, Maintenance Systems documentation consideration: Principles of Systems Documentation, Types of documentation and their importance, Enforcing documentation discipline in an organization. System Planning Data and fact gathering techniques, Assessing Project Feasibility: Technical, Operational, Economic, Cost Benefits Analysis, Schedule, legal and contractual, Political.

UNIT-III 9 hrs

Modular and Structured Design Module specifications. Top-down and bottom-up design. Module coupling and cohesion. Structure Charts System Design and Modeling Process Modeling, logical and physical design, , Entity-Relationship Modeling, EROs and DFDs, Concepts of Normalization, Process Description: Structured English, Decision Tree, Decision Tables. Documentation: Data Dictionary Recording Data Descriptions

UNIT –IV 9 hrs

Input and Output Classification of forms, Input/output forms design. User-interface design, Graphical interfaces. Standards and guidelines for GUI design. Designing Physical Files and Databases: Designing Fields, Designing Physical Records, Designing Physical Files, Designing Databases. Introduction to CASE Tools, Planning considerations. Conversion methods, procedures and controls. System acceptance criteria. System Evaluation and Performance. Testing and Validation. Preparing User Manual. Maintenance Activities and Issues

UNIT –V 9 hrs

Computer System Audit and Security Audit of Computer System Usage. Types of Threats to Computer System and Control Measures: Threat and Risk Analysis, Disaster Recovery and Contingency Planning, Viruses. 10. OO Analysis / Design Introduction to UML OO Development Life Cycle and Modeling. Static and dynamic modeling. Comparison of OO and Module-oriented Approach. Modelling using UML

TOTAL: 45 HOURS

TEXT BOOKS

1. J. Hoffer, "Modern Systems Analysis and Design", Second Edition, 2005, Joey George and Joseph Valacich, Pearson Education.
2. A. Dennis and B. H. Wixom, "Systems Analysis and Design", First Edition, 2004, John Wiley & Sons, Inc.

REFERENCES

1. J. Whitten, L. Bentley and K. Dittman, "Systems Analysis and Design Methods", Fifth Edition, 2006, Tata McGraw Hill.
2. K. C. Laudon and J. P. Laudon, "Management Information Systems", Seventh Edition, 2005

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BIT L01	DS & OOPS LAB	0	0	3	1
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1. Implementing Stacks and Queues
2. Implementation of singly Linked List
3. Implementation of Doubly Linked List
4. Polynomial Manipulations.
5. Insertion sort
6. Merge Sort
7. Quick Sort
8. Selection Sort
9. Heap Sort.
10. Linear search
11. Binary search.
12. Solving Knapsack Problem using Greedy Method.
13. Solving Traveling Salesman Problem using Dynamic Programming.
14. Solving 8 Queens Problem using Backtracking Method

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BBC L01	COMPUTER APPLICATIONS LAB	0	0	3	1
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Experiments using Tally

1. Creation of Company , Ledger and Trial Balance
2. Preparation of Profit And Loss Account, Trial Balance
3. Preparation of Balance Sheet
4. Cost Category and Cost Centre
5. Accounting Vouchers
6. Inventory Items

Experiments using MS- Excel

1. Exercise on creating report for sales forecasting.
2. Exercise on Sales analysis(line .bar, pie diagrams).
3. Exercise on regression fitting for investment pattern.

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SEMESTER -IV

BIT 002	DATABASE MANAGEMENT SYSTEMS	3	0	0	3
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UNIT I 9 hrs
INTRODUCTION: Purpose of database systems – Data Abstraction -data models – Instances and schemas – Data Independence – DDL – DML – Database user – ER model – Entity sets- keys – ER diagram – relational model – structure – relational algebra- relational calculus- views.

UNIT II 9 hrs
SQL - QBE - level – Basic Structure – various operations – relational database design – problems in the relational data base design – normalization – normalization using functional – Multivalued join dependence

UNIT III 9 hrs
File and system structure – overall system structure – file transaction – data dictionary – indexing and hashing basic concepts and B+ tree Indices - static and dynamic hash functions

UNIT IV 9 hrs
Recovery and atomicity-Failures Classification and types – Transaction model and Log based recovery. Schedules-Serial and Non Serial types-Serialization of schedules and views-locks based protocols –time based protocols, Validation techniques.

UNIT V 9 hrs
Distributed databases-Structures of distributed data bases –Trade offs in distributed the database –design of distributed the database –design of distributed database-Transparency and autonomy- distributed query proceeding-Recovery in distributed system –commit protocols –security and integrity violations –authorization and views security specifications –Encryption-Statistical databases.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Abraham Silberschatz, Henry F.Korth, S.Sudharshan "Database System Concepts", 4th edition, Tata McGraw Hill,New Delhi 2007.

REFERENCES

1. C.J.Date, "An Introduction to Database Systems", 7th edition, Addison Wesley, 2005.
2. Ullman, J.D. "Principle of Database Systems", 2nd Edition, Galgotia Publications Pvt. Ltd. 2008.
3. Raghu Ramakrishna, "Database Management Systems", WCB, McG Hill, 2008.

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BIT242	SYSTEMS PROGRAMMING AND OPERATING SYSTEMS	3	0	0	3
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UNIT I 9 hrs

Language processors: Introduction, Language processing Activities, Fundamentals of language Processing - Data Structures, Search data structures, Allocation data structures, scanning and parsing.

UNIT II 9 hrs

Assemblers: Elements of assembly language programming, simple assembly scheme, pass structure of Assemblers, Design of two pass Assemblers. Macros and Macro Processor: Macro definition and call, Macro expansion, nested Macro calls, Advanced Macro facilities, Design of a Macro preprocessor

UNIT III 9 hrs

Compilers and Interpreters: Aspects of Compilation, Memory allocation, Compilation of expressions, Compilation of control structures, Code optimization, Interpreters Linkers: Relocation and Linking concept, design of a Linker, Self Relocating Programs

UNIT IV 9 hrs

Introduction to OS: Types of OS, I/O Structure, Storage structure, Network Structure, System calls. Process Management: Process concept, Multithreading models, CPU Scheduling criteria, algorithms, Multiple processor Scheduling, Real Time Scheduling, Algorithm Evaluation, Deadlock characterization, Prevention, Avoidance, Detection and Recovery.

UNIT V 9 hrs

Storage Management: Swapping, Memory Allocation – Contiguous and noncontiguous-Paging, Segmentation, Virtual Memory, demand paging, Page replacement, Allocation of frames, Thrashing, File concept, Access methods, File system structure. I/O Systems-I/O hardware, Disk - Structure, Scheduling, Disk Management and swap space management.

TOTAL: 45 HOURS

TEXT BOOK:

1. Systems Programming and Operating Systems- D.M.Dhamdhare, Second revised Edition, Tata McGraw- Hill Publishing Company limited, New Delhi 2007.

REFERENCES

1. “Operating System Concepts” – Silberschatz, Galvin, Gagne, 6th Edition, John Wiley & Sons (Asia) Pt. Lt , Singapore, 2004.
2. “Operating System Design and Implementation”– Andrew S. Tanenbaum, Albert S, WoodHull, 2ndEdition, PHI, 2008.

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BIT 004	JAVA PROGRAMMING	3	1	0	4
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UNIT – I INTRODUCTION TO JAVA 9 hrs

Java Features - Benefits - Applications - Data Types Expressions - Conditional and iterations executions References -Arrays - Garbage Collection -Run time Environment.

UNIT – II JAVA OBJECT MODEL 9 hrs

Classes -variables -methods -constructors - Access specifies - Inheritance - Interfaces - packages - Strings –Dynamic Loading

UNIT – III EXPCETIONS AND THREADS 9 hrs

Exception and errors -Exception classes - Runtime Exception - Uncompact Exception - Finally block – User defined Exceptions. Creating Threads - Controlling Threads - Multithreading - Thread properties – Thread Groups

UNIT-IV JAVA I/O 9 hrs

Java Streams - File class -Serialization - Applets.

UNIT-V AWT 9hrs

AWT controls - panel - Layout managers - Event handing - Event Listless - Dialog box - Menus – Graphics Context.

TOTAL: 45 HOURS

TEXT BOOK:

1. H.Schildt , Java 2: The Complete Reference, 5th Edition – Tata McGraw Hill ,NewDelhi-2005.

REFERENCES

1. Java Secrets, IDG Book World, 2005.
2. Programming in Java – E.Balagurusamy - Tata McGraw Hill ,NewDelhi-2005

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BBC 003	MICROECONOMIC PRINCIPLES	3	0	0	3
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UNIT – I

9 hrs

Introduction: What is Microeconomics - Rationality Assumption in Economics; The Market - Construct a Model – Alternative Ways to Allocate Apartments Consumer Behavior: Consumer Preferences – Assumptions, preferences, marginal rate of substitution. Budget Constraints – Properties of the budget set, how the budget line changes. Consumer Choice – optimal choice, consumer demand, estimating utility functions. Individual Demand, Market Demand, Substitution and Income Effects – Slutsky Equation

UNIT – II

9 hrs

Choice under Uncertainty: Contingent consumption, expected utility, risk aversion, risk spreading, measuring risk, equilibrium in a market for risky assets. Production: Inputs and outputs, technological constraints, properties of technology, technical rate of substitution, diminishing rate of substitution, the long run and the short run Costs of Production: Cost Minimization, Return to Scale and the Cost Functions, Long-Run and Short-Run Costs, Fixed and Quasi-fixed cost, sunk cost, average costs, marginal costs and long run marginal costs.

UNIT – III

9 hrs

Profit Maximization and Supply Behavior: Profit Maximization, Profits fixed and variable factors, short run and long run profit maximization, profit maximization and returns to scale. Market environments, pure competition, Supply decision of a firm, Long run supply curve of a firm, rental rates and prices, politics of rent. Market Equilibrium: Market Equilibrium, Comparative Statics: Examples

UNIT – IV

9 hrs

Monopoly: Profit Maximization for a Monopoly, Inefficiency of Monopoly, Pricing with Market Power. Monopolistic Competition Factor Markets: Monopoly in the Output Market, Monopsony, Upstream and downstream monopolies. Oligopoly: Equilibrium Concept in an Oligopolistic Market, Cournot Equilibrium. The Stackelberg Model.

UNIT – V

9 hrs

Game Theory: Dominant Strategies, Nash Equilibrium Revisited, Mixed Strategies, Repeated Games. Sequential Games. General Equilibrium with Production: The Edgeworth box, trade, Pareto efficient allocation. The Robinson Crusoe Economy, Extended Robinson Crusoe Economy, Regulation. Market Failure vs. Government Failures, Unintended Consequences of Regulation: Some Examples, Alternative Theories of Regulation

TOTAL: 45 HOURS

TEXT BOOK:

1. “Intermediate Microeconomics-A Modern Approach”– Hal Varian, Amazon publication, ISBN-13: 978-0393973709, Edition: 5th February 1, 2005
2. Microeconomics by Robert Pindyck and Daniel Rubinfeld, Amazon publication, Edition: 3rd, 2007.

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BBC 004	OPERATIONS MANAGEMENT	3	1	0	4
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UNIT – I INTRODUCTION TO OPERATIONS MANAGEMENT 9hrs

Production Systems – Nature, Importance and organizational function. Characteristics of Modern Production and Operations function. Organisation of Production function. Recent Trends in Production and Operations Management. Role of Operations in Strategic Management. Production and Operations strategy – Elements and Competitive Priorities. Nature of International Operations Management.

UNIT – II FORECASTING, CAPACITY AND AGGREGATE PLANNING 9hrs

Demand Forecasting – Need, Types, Objectives and Steps. Overview of Qualitative and Quantitative methods. Capacity Planning – Long range, Types, Rough cut plan, Capacity Requirements Planning (CRP), Developing capacity alternatives. Aggregate Planning - Approaches, costs, relationship to Master Production schedule. Overview of MRP, MRP II and ERP.

UNIT – III DESIGN OF PRODUCT, SERVICE AND WORK SYSTEMS 9hrs

Product Design – Influencing factors, Approaches, Legal, Ethical and Environmental issues. Process – Planning, Selection, Strategy, Major Decisions. Service Operations – Types, Strategies, Scheduling (Multiple resources and cyclical scheduling). Work Study – Objectives, Procedure. Method Study and Motion Study. Work Measurement and Productivity – Measuring Productivity and Methods to improve productivity.

UNIT – IV MATERIALS MANAGEMENT 9hrs

Materials Management – Objectives, Planning, Budgeting and Control. Overview of Materials Management Information Systems (MMIS). 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 PROJECT AND FACILITY PLANNING 9hrs

Project Management – Scheduling Techniques, PERT, CPM, Crashing CPM networks – Simple Problems. Facility Location – Theories, Steps in Selection, Location Models – Simple Problems. Facility Layout – Principles, Types, Planning tools and techniques.

TOTAL: 45 HOURS

TEXT BOOKS

1. Aswathappa K and Shridhara Bhat K, “Production and Operations Management”, Himalaya Publishing House, Revised Second Edition, 2008.
2. Pannerselvam R, “Production and Operations Management”, Prentice Hall India, Second Edition, 2008.

REFERENCES

1. Kanishka Bedi, “Production and Operations Management”, Oxford University Press, 2004.
2. Russel and Taylor, “Operations Management”, Wiley, Fifth Edition, 2006.

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Admission Year 2013 - 14 onwards

BIT481	ENTERPRISE RESOURCE PLANNING	3	0	0	3
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UNIT 1 INTRODUCTION TO ERP 9 hrs

Evolution of ERP – Advantages of ERP – Business modeling – Business process engineering – Management Information systems – Decision support system – Executive information system – Data Ware housing – Data Mining – supply chain management

UNIT II BUSINESS MODELING FOR ERP 9 hrs

Building The Business model - ERP implementation – an Overview – Role of Consultant, Vendors and Users, Customization- Precautions- ERP Post implementation options ERP Implementation Technology – Guidelines for ERP Implementation.

UNIT III ERP AND THE COMPETITIVE ADVANTAGE 9 hrs

ERP domain MPGPRO – IFS/Avalon- Industrial and financial systems- Baan IV SAP –Market Dynamics and dynamic strategy.

UNIT IV COMMERCIAL ERP PACKAGE 9 hrs

Description – Multi- client server solution- Open technology- User Interface- ApplicationIntegration.

UNIT V ARCHITECTURE 9 hrs

Basic architectural Concepts- The system control interfaces- Services-Presentation interface – Database Interface.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Vinod Kumar Garg and N.K.Venkita Krishnan, “Enterprise Resource Planning- Concepts and Practice”, PHI, 2008.
2. “Enterprise Resource Planning” by Alexis Leon, Tata McGraw Hill publications, 2005.

REFERENCES

1. Jose Antonio Fernandez, the SAP R/3 Handbook, TMH, 2008.

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BIT L02	JAVA & DBMS LAB	0	0	3	1
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JAVA

1. Stand alone Java Applications
2. Working with various AWT controls
3. Working with Panel and Layout
4. Database connectivity with Java as front end

DBMS – (ORACLE LAB)

5. Interfacing with database systems – SQL – DDL / DML command – Querying the database.
6. Standard forms / stored procedure - learning functions keys – Programming with triggers
7. Report writers – Types of reports – menu system – Formatting reports, running a report
8. Maintaining – database security – High level language interface – Spread sheet – Graphs .

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BBC L02	ERP LAB	0	0	3	1
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1. ERP for students attendance maintenance.
2. ERP for staff attendance maintenance.
3. ERP for stores maintenance.
4. ERP for students' result analysis .
5. ERP for department-wise budgeting.
6. ERP for order processing and despatch.

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SEMESTER – V

BIT 005	VISUAL PROGRAMMING	3	0	0	3
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UNIT I

9 hrs

Forms and Control: Customizing a Form-Writing Simple Programs-Toolbox-Creating Controls-Name Property-Command Button-Access Keys-Image Controls-Text Boxes-Labels-Message Boxes-Grid-Editing Tools-Variables-Data Types-String –Numbers.

UNIT II

9 hrs

Functions and Events: Displaying Information-Determinate Loops-Indeterminate Loops-Conditionals-Built-In Functions-Functions and Procedures- Lists-Arrays-Sorting and Searching-Records-Control Arrays-Combo Boxes-Grid Control-Projects with Multiple forms-Do Events and Sub Main-Error Trapping.

UNIT III

9 hrs

Menus and Mouse Activity : VB Objects-Dialogue Boxes-Common Controls-Menus-MDIForms-Testing, Debugging and optimization-working with graphics-Monitoring MouseActivity-File Handling-File System Controls-File System Objects-COM/OLE-Automation-DLL Services-OLE Drag and Drop.

UNIT IV

9 hrs

Visual C++ Programming : Visual C++ components – developing simple applications – Microsoft foundation classes – controls – message handling – document view architecture –dialog based applications – mouse and keyboard events – reading and writing documents –SDI and MDI environments – splitter windows and multiple views.

UNIT V

9 hrs

Advanced Concepts: Concepts and tools for Windows application – Procedure oriented Windows applications –Windows Applications using the MFC–Application and class wizards– Getting started with OLE – Getting started with Active X Controls – COM and DHTML

TOTAL: 45 HOURS

TEXT BOOKS:

1. Gary Cornell-Visual Basic 6 from the Ground Up-Tata McGraw Hill, New Delhi, 2007.
2. David Kruglirski J, “Inside Visual C++”, Microsoft Press,2006.
3. CHRIS H.PAPPAS & WILLIAM H.MURRAY –The Complete reference – Visual C++, Tata McGraw Hill, edition 2005,

REFERENCES

1. Deitel&Deitel, T.R.Nieto, “Visual Basic 6, How to program”, Prentice Hall of India, 2006.
2. Lars Klander, “Core visual C++ 6”, Pearson Education Asia, 2004.

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BIT 006	OBJECT ORIENTED ANALYSIS AND DESIGN	3	0	0	3
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UNIT I MODELING TECHNIQUES 9 hrs
Object model- Basic concepts – Association – Aggregation – Inheritance – Interface – Polymorphism Dynamic Model, Functional Model

UNIT II ANALYSIS PHASE 9 hrs
Introduction – Steps in Analysis phase – case study: Library management systems – Design Phase – Aims – Characteristics case study; Overview of OOD methods-Booch Method – Jacobson method – Rum Baugh method

UNIT III UML 9 hrs
Introduction –UML Diagrams – Use case -sequence – Collaboration – class–statetransaction – component – deployment

UNIT IV RATIONAL ROSE 9 hrs
Parts of Screen – Browser – Documentation window – Toolbars – Diagram window Logwindow – views- use case view – logical view – component view – Deployment viewCode Generation using Rational Rose: Java code generation – Visualbasic code generationReverse Engineering: Introduction – Reverse engineering with java – Visual Basic

UNIT V TESTING 9 hrs
Testing Introduction – Unit level testing – Integration testing – Qualification testing – regression testing – test cases – test runners

TOTAL: 45 HOURS

TEXT BOOKS:

1. ATUL Kahate, “Object Oriented Analysis & Design” ,Tata McGraw Hill ,New Delhi,2007
2. Wendy Boggs & Michael Boggs-“Mastering UML with Rational Rose”,BPB PublicationsJohn Thomas, Mathew young –“Java & J2EE Testing patterns”,Wiley dream tech India Pvt Ltd, 2006

REFERENCES

1. Martin Fowler, Kendallscott, “UML Distilled – Applying the standard object modeling language”, Addison Wesley, 2007
2. Grady Booch , “Object Oriented Analysis and Design” second edition Pearson Education,Asia 2005.

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BIT351	USER INTERFACE DESIGN	3	0	0	3
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UNIT I: INTRODUCTION

9 hrs

Human – Computer Interface – Characteristics Of Graphics Interface – Direct Manipulation Graphical System – Web User Interface – Popularity – Characteristic & Principles.

UNIT II: HUMAN COMPUTER INTERACTION

9 hrs

User Interface Design Process – Obstacles – Usability – Human Characteristic In Design – Human Interaction Speed – Business Functions – Requirement Analysis – Direct – Indirect Methods – Basic Business Functions – Designs Standards – System Timings – Human Consideration in Screen Design – Structures Of Menus – Functions Of Menus – Contents Of Menu Choice – Navigating Menus – Graphical Menus.

UNIT III: WINDOWS

9 hrs

Characteristics – Components – Presentation Styles – Types – Managements – Organizations – Operations – Web Systems – Device – Based Controls Characteristics – Screen – Based Controls – Operate Control – Text Boxes – Selection Control – Combination Control – Custom Control – Presentation Control.

UNIT IV: MULTIMEDIA

9 hrs

Text For Web Pages – Effective Feedback - Guidance and Assistance – Internationalization – Accessibility – Icons – Image – Multimedia – Coloring.

UNIT V: WINDOWS LAYOUT – TEST

9 hrs

Prototypes – Kinds Of Tests – Retest – Information Search – Visualization – Hypermedia – WWW- Software Tools.

TOTAL: 45 HOURS

TEXT BOOK:

1. Wilbent. O. Galitz, “The Essential Guide To User Interface Design”, John Wiley & Sons, 2004.

REFERENCES

1. Ben Scheiderman, “Design The User Interface”, Pearson Education, 2006.
2. Alan Cooper, “The Essential Of User Interface Design”, Wiley – Dream Tech Ltd., 2007 .

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BBC 005	MACROECONOMIC PRINCIPLES	3	1	0	4
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UNIT I:

9 hrs

Introduction-Definition-Key Concepts-Types of Macroeconomics Policy- Macroeconomic Issues-Schools of Thought- Measuring the price level and Inflation-National Income and Economic Welfare – Approaches to Measurement of NI-National and Domestic Concepts- Gross and Net concepts- Market prices and factor costs.

UNIT II:

9 hrs

The New-Keynesian Model—Impact of Keynesian Thought- Neo-classical Model - The IS-LM-FE Model- Money Market Equilibrium [LM curve]-Policy Analysis with IS-LM-Impact on employment-Role of Foreign Direct Investment.

UNIT III:

9 hrs

Balance of Payments- Equilibrium and Disequilibrium in BOP- Floating Exchange Rates- Capital account convertibility debate in India- Macroeconomic crises: explaining the experiences around the world

UNIT IV:

9 hrs

The Foreign Exchange Market – The Balance of Payments-The components of BOP- Internal and External Balance-Monetary and Fiscal Policy under Fixed Exchange Rates-India's experience with Exchange Rates- Impact of fluctuations in exchange rate on export, import and growth of domestic industry

UNIT V:

9 hrs

Measuring Unemployment Rate – Cost – Duration –Fact and framework- Eliminating Keynesian Unemployment-Private and social cost of unemployment-Money and Inflation-Inflation and Interest Rates- Inflation, Unemployment and Output-Costs of Inflation-International Trade and Commercial Policy-Impact of International Trade Welfare.

TOTAL: 45 HOURS

TEXT BOOK

1. Abel, Andrew B., Ben S. Bernanke, and Dean Croushore. *Macroeconomics*. 6th ed. Upper Saddle River, NJ: Prentice Hall, 2007. ISBN: 9780321415547.

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BBC 006	INTERNATIONAL BUSINESS STRATEGY	3	0	0	3
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UNIT – I

9 hrs

Introductions and initial discussion on Globalization- Globalization & Business Today- Ethics in International Business- International Trade Theory- Foreign Direct Investment- National Differences in Political Economy- National Differences in Culture

UNIT – II

9 hrs

The Strategy of International Business- Entering Foreign Markets- Exporting, Importing, & Countertrade - Global Production, Outsourcing, & Logistics- Global Marketing and R &D - Global HR

UNIT – III

9 hrs

E-Commerce in the global Environment, Government's involvement in global B2, B2B business terms and conditions (global business contract model) including issues such as methods of payment, governing laws, specifications, delivery terms, etc

UNIT – IV

9 hrs

Export controls and re-export authorization- Import issues (duties, tariffs, quotas, methodology)- Countertrade and offsets- International transfer pricing (taxes and duties)- Business operating environment (ethics and laws including FCPA)

UNIT – V

9 hrs

MARKETING AND BUSINESS STRATEGY - World Class Business Environment, CASE STUDIES

TOTAL: 45 HOURS

TEXT BOOK:

1. Hill, Charles :“Global Business Today” 6th ed, ©2008. McGraw Hill Irwin
ISBN: 9780073381398.
2. Cullen, J.B. “Multinational Management: A Strategic Approach “(3rd ed). Ohio:
South-Western, 2008.

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BBC 007	FINANCIAL MANAGEMENT	3	0	0	3
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UNIT - I 9 hrs

Financial Management – Meaning and Objectives- profit Vs. Wealth maximization, Scope and Functions of Financial Management, Structures of the Financial System – Financial instrument and financial market Financial Planning and Forecasting.

UNIT –II 9 hrs

Capitalization – Under and Over Capitalization, Capital Structures – Meaning and significance, theories- NI Approach, NOI approach And MM approaches. Computation of cost of capital – Need and Significance - WACC - Leverages – Type and Significance.

UNIT –III 9 hrs

Capital Budgeting – Nature and Significance, Methods of evaluating Capital Expenditure proposals – PB, NPV. PI and DisconutedPB IRR. Time value of money- Discounting and Compounding.

UNIT –IV 9 hrs

Analysis and interpretation of Financial Statements using the techniques of Ratio Analysis and Fund Flow analysis. Management of Profits-Dividend Policy, Procedural and Legal formalities involved in the payment of dividend-Bonus Shares.

UNIT –V. 9 hrs

Working Capital Management – Nature of Working Capital Management, Need for working capital – operating cycle, estimation of working capital requirement – Management of Cash and Receivables, Cash Budget.

TOTAL: 45 HOURS

TEXT BOOK:

1. M PANDEY, “FINANCIAL MANAGEMENT “ , Vikas Publishing House Pvt Ltd , 2008
2. PETERSON, PAMELA.P, “FINANCIAL MANAGEMENT & ANALYSIS “ ,McGraw Hill, 2005.

REFERENCES

1. BODIE,ZVI,KANE,ALEX,MARCUS,ALAN J , “Essentials of Investment” , McGraw Hill,2006.

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BIT L03	CASE TOOLS LAB	0	0	3	1
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1. Course Registration System
2. Quiz System
3. Online ticket reservation system
4. Student marks analyzing system
5. ATM system
6. Platform assignment system for the trains in a railway station
7. Stock maintenance
8. E-mail Client system.

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BBC L03	BUSINESS PROCESS TOOLS DEVELOPMENT LAB	0	0	3	1
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1. Create process models using Oracle Business Process Composer
2. Create real-time dashboards using Oracle BAM
3. Creating and Using Project Templates
4. GUI based data entry.
5. Create an application for working capital management.
6. Running Simulations for results on business process.
7. Create a Real-Time Report Using BAM

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SEMESTER VI

BIT362	COMPONENT BASED TECHNOLOGY	3	0	0	3
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UNIT I BASIC CONCEPTS 9 hrs

Software components: COM / DCOM – Java Beans – Enterprise Java Beans – CORBA:
Distributed objects: request and response- remote reference – IDL – Interface- proxy-
marshalling

UNIT II BASIC PATTERNS AND INHERENT ISSUES 9 hrs

Factory - Broker - Garbage Collection on the Client and Server - Persistence of Remote
References – Transactions - Concurrency in Server Objects - Applying Client/Server
Relation recursively - Event Driven Programming.

UNIT III CORBA 9 hrs

Java Programming with CORBA - Overview of Java ORBs - First Java ORB Application -
OMG IDL to Java Mapping - ORB Run-Time System - Discovering Services (Naming,
Trading)

UNIT IV EJB 9 hrs

Introduction – Developing an EJB component using entity Beans – Message driven beans –
Active X controls – Active X DLLs – Active X Exe

UNIT V DISTRIBUTED OBJECT DATABASE MANAGEMENT 9 hrs

Object model features - Fundamental object management issues - DOM architectures -
Object caching - Object clustering - Object migration- Query processing in distributed
object DBMS - Transaction management in distributed object DBMS.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Ed Roman, “Mastering EJB & The Java 2 platform Enterprise Edition” , IInd Edition, John Wiley & sons,2006
2. Java Programming with CORBA by Andreas Vogel and Keith Duddy, 3rd Edition, Wiley Publications, 2005

REFERENCES

1. George Shepherd Brad King , “Inside ATL” ,WP Publishers and Distributors (P) Ltd, South Asian Edition,2007.
2. Ozsu and Valduriez- “Principles of Distributed Database Systems”, IInd Edition ,Pearson Education Asia,2005
3. Rogerson, “ Inside COM ” , Microsoft press, WP Publishers,2006
4. James McGovern, Rahim Adatea , “J2EE 1.4 “, Bible- Wiley- Dreamtech India Pvt ltd,2005

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BIT363	DOT NET	3	1	0	4
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UNIT I 9 hrs
Introduction – Origin - .NET Framework – Common Language Runtime – Common Type system – Common Language specification – Class Library – Assembly – Name space-XML as .NET meta data – Benefit – Downsides.

UNIT II 9 hrs
Introduction to C# - Overview of C# - Literals – Variables – Data Types – Operators – Expressions – Branching – Looping

UNIT III 9 hrs
Methods in C# - classes and objects – inheritance and polymorphism – operator overloading – Events – Console I/O operators

UNIT IV 9 hrs
IDE and Language features of VB.NET- Namespaces – windows forms- Architecture of windows forms – VB.NET controls - Menu control – Link label control – Checked list box – provider controls – VB.NET object oriented implementation interfaces.

UNIT V 9 hrs
Data Access in VB.NET – ADO.NET – managed providers – Dataset – ASP.NET – Benefits – Programming models – web forms – Web controls – View state.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Billy S.Hollis& Rockford Lhokha ,VB.NET programming, Wrox press Ltd., Shroft Publications, Mumbai,kolkata, 2004
2. E.Balagurusamy, “Programming in C#”, Tata McGraw Hill,New Delhi, 2004

REFERENCES

1. Microsoft, “C# Language specifications”, Microsoft press, 2006

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BCS407	DATA MINING AND WAREHOUSING	3	0	0	3
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UNIT I – INTRODUCTION

9 hrs

Introduction - Client server computing model-Data warehouse-Parallel systems-Cluster Systems-Distributed DBMS-Client server RDBMS solutions.

UNIT II - DATA WAREHOUSING

9 hrs

Components-Building a Data Warehouse-mapping Data Warehouse to a Multiprocessor-Architecture-DBMS Schemas for Design Support-Data Extraction-Cleaning and Transferring tools- Meta data.

UNIT III - BUSINESS TOOLS

9 hrs

Reporting and Query tools and Application-OLAP-Patterns and Models-Statistics- Artificial Intelligence.

UNIT IV - DATA MINING

9 hrs

Introduction-Decision Trees- Neural Networks – Nearest Neighbor and clustering – Genetic Algorithm – Rule induction – Selecting and using the right technique.

UNIT V - DATA VISUALIZATION AND OVERALL PERSPECTIVE

9 hrs

Tools-Applications-Data visualization Techniques– Case Study

TOTAL: 45 HOURS

TEXT BOOKS:

1. Alex Berson-Stephen. J.Smith, “Data warehousing-Data Mining & OLAP”, TMH 2006
2. Margaret H Dunham.” Data Mining – Introduction and advanced topics”, Pearson Education 2005.

REFERENCES

1. Jiawei Han and MichelineKamber , “Data mining concepts and techniques”, Morgan Kaufmann Publishers,2005.
2. Arun K Pujari, “Data Mining Techniques”, Universities Press (India) Ltd., 2004.
3. Sam Anahory, Dennis Murry,” Data Warehousing in the real world”, Pearson Education, 2007.

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BBC 008	BANKING AND INSURANCE	3	0	0	3
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UNIT I 9 hrs.

Meaning of Banking- Banking Regulation Act 1949, Definition of Banking - Classifications of Banks and Types of Banking- Commercial Banking - Functions, Central Banking - Functions – RBI Guidelines.

UNIT II 9 hrs.

Opening Bank Account - Types of Deposit Account, Account holders - Methods of Remittance - Technology in Banking.

UNIT III 9 hrs.

E- Banking- An overview, Electronic Money- Electronic Funds Transfer, Electronic Clearing Services- Electronic Payment System, INFINET. Internet Banking: Mechanics of Internet Banking- International Banking vs. Traditional Banking- Issues and Drawbacks. Mobile Banking: Features and Issues, Telephone Banking: Mechanism- Drawbacks.

UNIT IV 9 hrs.

ATM Features and Mechanism- Plastic Money, Customer Grievances, Redressal Ombudsman.

UNIT V 9 hrs.

Introduction to Life Insurance, General Insurance, Fire Insurance and Marine Insurance- Principles – Market Players in India- Insurance Products- Insurance Documents.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Dr.Gurusamy.S, “Banking Theory Law and Practice”, 2nd Edition, Tata McGraw Hill, 2009.
2. Muraleedharan.G., “Modern Banking”, 1st Edition, PHI Learning Publications, 2009.

REFERENCES

1. Gulati, Neelam, “Principles and Insurance Management”, 1st Edition, Excel Books, 2009.
2. JyolsnaSethi&Nishwan Bhatia, “Elements of Banking & Insurance”, 1st Edition, Prentice Hall Inc., 2007.
3. Murthy.A,” Elements of Insurance”, 2nd Edition, Margham Publications, 2009.

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BCSED1	DECISION SUPPORT SYSTEM	3	0	0	3
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UNIT-I INTRODUCTION

9 hrs

Decision support at roadway package system, Managers and decision making, Managerial decision making and informative system, Managers and computerized support, Framework and concept of decision support, Systems, Models, Modeling process, intelligence phase, Design phase, Implementation phase.

UNIT-II DSS

9 hrs

DSS configuration, Characteristics and capabilities of DSS, component of DSS, Datamanagement subsystem, Model management subsystem, Dialog subsystem, classification of DSS, Distinguishing DSS from MIS, Modelling for MSS, Static and dynamic models, Treating certainty, Uncertainty and risk, Influence diagrams, Optimization via mathematical programming, Heuristic program, Visual spreadsheet, Financial and planning modeling

UNIT-III INTELLIGENT DSS, USER INTERFACE

9 hrs

Knowledge based DSS concepts and definitions, Artificial intelligence versus natural intelligence, Knowledge in AI, Types of knowledge based DSS, Intelligent DSS, User interface, Interface models, Graphics, Multimedia and hypermedia, GIS, NLP overview, methods, DSS development strategies, Development process, Team development DSS, DSS development tools.

UNIT-IV ENTERPRISE SUPPORT SYSTEM

9 hrs

Networked Decision Support: The internet, Intranet and collaborative technologies, Group decision support system - Decision making in groups, Goal of GDSS, GDSS software, Idea generation, Negotiation support system - EIS concepts and definition, Executive role, Comparing and integrating EIS and DSS, Enterprise EIS, EIS implementation.

UNIT-V EXPERT SYSTEM AND INTELLIGENT SYSTEM:

9 hrs

Fundamentals of expert system, Expert system concepts, Structure, Human elements, Working, Benefits, Limitation, Success factors, Types, Knowledge engineering, Scope of knowledge, Difficulties in knowledge acquisition, Methods of knowledge acquisition, Knowledge representation, Inferencing with rules, Frames, Introduction to building expert systems.

TOTAL: 45 HOURS

TEXT BOOK:

1. EFRAIM TURBAN, JAYE, ARONSON, "Decision Support Systems and Intelligence Systems"-7th Edition, Addison Wesley, 2004.

REFERENCES

1. Turban E., "Decision Support and Expert Systems, Management Support Systems", 7th Ed., Maxwell Macmillan, 2006.
2. V.S. Janaki Raman and K. Sarukesi, "Decision Support Systems", Prentice Hall of India Pvt. Ltd., 2004

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BIT366	SOFTWARE COMPONENT & .NET LAB	0	0	3	1
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1. Applications using .NET
2. Java Beans
3. Active-X controls.
4. Enterprise Java Beans
5. CORBA
6. Applications using COM/DCOM

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BBC L04	FINANCIAL MANAGEMENT TOOLS LAB (ORACLE FINANCIAL)	0	0	3	1
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Implementation Case Studies for the following:

1. Multi-Org Access Control (MOAC)
2. Sub-ledger Accounting
3. Oracle E-Business Tax
4. Oracle General Ledger
5. Oracle Fixed Assets
6. Oracle Purchasing
7. Oracle Accounts Payable
8. Oracle Cash Management

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SEMESTER –VII

BIT471	E-COMMERCE	3	0	0	3
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UNIT I

9 hrs

Definition – Forces Fueling Industry Framework – Types of E-Commerce- Key questions for management. The internet and the access provider industry: Internet Service providers, companies providing Internet Access – Internet versus online services – predicting the future of the IAP market

UNIT II

9 hrs

Applications : History of web – Web Hit – Web and Electronic Commerce – Web and Intra – Business customer – Intranet Architecture Concepts & Technology: Key concepts behind the web – overview of the web's technical architecture – Interactive web applications – web and Database Integration – Web software Development tools – Encryption and Transaction security – World Wide Web and security

UNIT III

9 hrs

Electronic Payment Systems: Overview of the Electronic payment Technology – Electronic or Digital cash – electronic checks – online credit card – based systems and others emerging financial instruments Electronic Commerce & Banking: Changing dynamics in the banking industry – Home Banking history – Implementation approaches – Open versus closed models– mercantile models from the consumer's perspective – management challenges in online retailing

UNIT IV:

9 hrs

Supply – chain management fundamentals – managing retail supply chains – supply – chain application software – future of supply – chain software Customer Asset Management Online sales forces automation – online customer service and support – Technology and marketing strategy

UNIT V:

9hrs

Intranets and manufacturing: Defining the terminology – emerging business requirements – manufacturing Information systems – Intranet- Based manufacturing – Logistics management – EDI Corporate Finance: Intranet & Finance – understanding the different software modules – Human Resource management systems – size / Structure of Financials software market

TOTAL: 45 HOURS

TEXT BOOK:

1. Ravi Kalakota & Andrew Winston – “Electronic Commerce – A managerial guide”, Addison Wilsey, 2007

REFERENCES

1. David Whiteley, “Electronic Commerce: Strategy, Technologies and Applications” McGraw Hill, 2008
2. K.Bajaj & D.Nag, “E-Commerce”, Tata McGraw Hill Publications, 2005.

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BIT472	WEB TECHNOLOGY & WEB SERVICES	3	1	0	4
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UNIT I INTRODUCTION

9 hrs

World Wide Web concepts – Web Browser – Cookies – Firewalls – Viruses – Internet Services – Types of accounts – Types of Connections – ISP HTML - HTML Tags – Tables – Frames – Forms – Input Fields – Passing form data – Style sheets – Different approaches to style sheets.

UNIT II COMMON GATEWAY INTERFACE PROGRAM

9 hrs

Programming CGI scripts – How CGI works – CGI script structure – CGI environment variables SERVER SIDE PROGRAMMING XML overview – linking with XML – XML markup – DTD and validation

UNIT III XML SCHEMA

9 hrs

Namespaces- Qualification - Global declarations - Modular schemas SOAP Introduction to SOAP(Simple Object Access Protocol) – SOAP and XML- SOAP messages- SOAP message exchange model – SOAP encoding and XML Schemas – SOAP data types – SOAP transports.

UNIT IV WSDL(WEB SERVICES DESCRIPTION LANGUAGE)

9 hrs

Describing Web Services - WSDL anatomy- Defining data types and messages- defining a web service interface – defining a web service implementation – Message patterns

UNIT V UDDI

9 hrs

UDDI registries – UDDI publish interface – UDDI inquiry interface – Using UDDI and WSDL together.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Margaret Levine Young, “The Complete Reference- Internet Millennium Edition”, Tata McGraw Hill, 2009.
2. Eric Ladd, Jim O’ Donnel, “Using HTML 4, XML and Java”, Prentice Hall of India – QUE, 2009
3. Frank. P. Coyle,” XML, Web Services And The Data Revolution”, Pearson Education, 2005.

REFERENCES

1. Ramesh Nagappan , Robert Skoczylas and Rima Patel Sriganesh, “ Developing Java Web Services”, Wiley Publishing Inc., 2004.
2. SandeepChatterjee, James Webber, “Developing Enterprise Web Services”, Pearson Education, 2004.

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Admission Year 2013 - 14 onwards

BIT 007	COMPUTER NETWORKS	3	0	0	3
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UNIT I 9 hrs
Network Hardware and Software, Network Topology, OSI Reference Model, Physical layer – Transmission media- Basis of telephone systems – Transmission and multiplexing - ISDN

UNIT II 9 hrs
Data link layer – Design Issues-Error Detection and correction-Sliding Window Protocols-IEEE Standard 802 for LAN-Bridges

UNIT III 9 hrs
Network Layer –Design Issues-Routing Algorithms-Congestion Control Algorithms-Internetworking-the network layer in the internet

UNIT IV 9 hrs
Transport layer – Services-Internet transport protocols-TCP-UDP-ATM Layer Protocols

UNIT V 9 hrs
Application Layer-Network Security-DNS-SNMP-WWW-Multimedia

TOTAL: 45 HOURS

TEXT BOOK:

1. Behrouz A Forouzan, “Data Communication & Networking” TataMcGrawHill - 2004
2. Andrew S.Tanenbaum “Computer Networks “, 4th Edition, PHI, New Delhi, 2007.

REFERENCES

1. James F Kurose and Keith W Ross “Computer Networking –TopDown Approach Featuring the Internet”, Pearson Education – 2006.
2. Larry L Peterson and Peter S Davie “Computer Networks”, Harcount Asia Pvt Ltd, 2nd Edition, 2004.

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BCS309	SOFTWARE ENGINEERING	3	0	0	3
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UNIT I

9 hrs

Introduction – Computer Based System Engineering – Emergent System Properties – Systems and their environment – System modeling – The system engineering process – System procurement - Software Process – Software Process Models – Process iteration – Software specification – Software design and implementation – Software validation – Software evolution – Automated process support – Project Management – Management activities - Project planning – Project scheduling – Risk Management.

UNIT II

9 hrs

Software Requirements – Functional and non-functional requirements – User requirements – System requirements – The software requirements document – Requirements engineering Processes – Feasibility studies – Requirements elicitation and analysis – Requirements validation – Requirements management – System Models – Context models – Behavioral models – Data models – Object Models – CASE Workbenches – Software Prototyping – Prototyping in the software process – Rapid prototyping technique – User Interface Prototyping – Formal specification – Formal specification in the software process – Interface specification – Behavioral specification

UNIT III

9 hrs

Architectural Design – System structuring – Control models – Modular decomposition – domain Specific architectures – Distributed systems architectures – Multiprocessor architectures – Client-Server Architectures – Distributed object architectures – CORBA – Object-Oriented Design – Objects and object classes – Design Evolution – Real-time Software design – System design, Real-time executives –Monitoring and control systems – Data acquisition systems – User Interface Design – Principles – User Interaction – Information Presentation – User Support – Interface Evaluation

UNIT-IV

9 hrs

Dependability – Critical systems – Availability and Reliability – Safety – Security – Critical System Specification – Software Reliability Specification – Safety Specification – Security Specification – Critical System Development – Fault Minimization – Fault Tolerance – Fault Tolerant Architectures – Safe System Design

UNIT V

9 hrs

Verification and Validation – Planning – Software inspections – Automated static analysis – Clean room Software Development – Software Testing – Defect Testing – Integration Testing – Object Oriented Testing – Testing Work benches – Critical Systems validation – Formal methods and Critical Systems - Reliability validations – Safety Assurance – Security Assessments

TOTAL: 45 HOURS

TEXT BOOK:

1. Sommerville I., “Software Engineering”, 8th edition, Addison Wesley, 2006.

REFERENCES

1. Roger S. Pressman, ‘Software Engineering: A Practitioner Approach’, 6th edition, McGraw-Hill, 2005
2. David Gustafson, “Software Engineering”, Schaum’s outlines, Tata McGraw-Hill, 2006.
3. Douglas Bell, Software Engineering for Students, 4/E, Addison-Wesley 2005.

BIT XX1	COMPUTATIONAL AND INTELLIGENCE TOOLS	3	0	0	3
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BIT476	WEB SERVICE & E-COMMERCE LAB	0	0	3	1
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1. Basic program how to create web service
2. How to publish created web services.
3. Library automation
4. Ticket reservation
5. Chat
6. Portal
7. Voice mail services
8. Search Engines.

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BBC L04	BUSINESS INTELLIGENCE LAB	0	0	3	1
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1. SQL Server Integration Services

- ☐ Create A SSIS Project
- ☐ Add a Data Source
- ☐ Create A Data Flow
- ☐ Create Another Data Flow
- ☐ Load Data via a SQL Statement
- ☐ Populating the Fact Table
- ☐ Loading Manufacturing Facts
- ☐ Handling Errors
- ☐ Inventory Fact Flow

2. SQL Server Analysis Services

- ☐ Define an OLAP Cube
- ☐ Working with Measures and Measure Groups
- ☐ Time and Hierarchies
- ☐ Relating Dimensions
- ☐ Build Deploy and Browse the Cube
- ☐ Multiple Partitions
- ☐ Set Storage
- ☐ Design Aggregations
- ☐ Default Members

3. SQL Server Reporting Services

- ☐ SSRS Projects Report Wizard
- ☐ Report Builder 3.0
- ☐ Creating Charts

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4. MDX

- ☐ Understand the Cell
- ☐ Write a Tuple
- ☐ MDX Sets
- ☐ Write a SELECT statement
- ☐ Write a Function
- ☐ Implement Time

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SEMESTER –VIII

BBC 009	PORTFOLIO MANAGEMENT	3	0	0	3
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UNIT I 9 hrs.

Meaning of Investment - Difference between Speculation and Investment; Investment alternatives. Security. Risk and return calculations -Types of risks - Valuation of Securities, Zero Growth Model, Constant Growth Model, Two&Three Growth Model.

UNIT II 9hrs.

Financial Market- Primary Market- Secondary Market-Stock Exchanges- Meaning – Features – Functions – SEBI– Rights, Powers – Functions – NSE – BSE – Derivatives – Options – Futures – Forward Contracts.

UNIT III 9 hrs.

Security analysis-Fundamental analysis- Technical analysis- Tools & Charting techniques- Efficient Market Hypothesis.

UNIT IV 9hrs.

Portfolio Management - Introduction & process - Traditional / Modern portfolio - Return & risk calculation-Correlation coefficient-Portfolio risk& return of two and three security portfolios.

UNIT V 9hrs.

Markowitz portfolio model-Utility curves in portfolio selection -Capital asset pricing model -Capital market line &Security market line - Portfolio performance- Sharpe , Treynor and Jensen's index - Portfolio revision.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Bhalla.V.K, "Investment Management", 4th Edition Sultan, Chand & Co, 2008.
2. PunithavathiPandian, "Security Analysis & Portfolio Management", 2nd, Vikas Publications, 2009.

REFERENCES

1. Prasanna Chandra, "Investment & Portfolio Management", 2nd Edition, Tata McGraw Hill, 2005.
2. Preeti Singh, "Security Analysis & Portfolio Management", 17th Edition, Himalaya Publications, 2009.

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BCS409	INFORMATION STORAGE MANAGEMENT	3	1	0	4
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UNIT –I

9 hrs

• Review the amount of information being created and understand the value of information to a business • Identify Data Center infrastructure elements and their requirements • RAID , SCSI , NAS and SAN.

UNIT– II

9 hrs

Understand role of ILM strategy • List physical and logical components of host, connectivity, and storage • Detail the disk drive architecture and performance • Describe the concept of RAID and different RAID levels (RAID 0, 1, 3, 5, 0+1/1+0, and 6) • Define Intelligent Storage System (ISS) and its components • Implementation of ISS as high-end and midrange storage arrays.

UNIT – III

9hrs

• Describe the implementation of DAS and overview of SCSI • Define and detail the architecture, components, and topologies of FC-SAN, NAS, and IP-SAN • Understand the object based storage system CAS and its application as long-term archiving solution • Describe block-level and file-level storage virtualization technologies and processes • Overview of emerging technologies such as cloud storage and virtual provisioning

UNIT– IV

9 hrs

• Understand the concept of information availability and its measurement • Describe the causes and consequences of downtime • Define RTO, and RPO • Identify single points of failure in a storage infrastructure and solutions for its mitigation • Describe the backup/recovery purposes and considerations • Discuss architecture and different backup/Recovery topologies • Describe local replication technologies and their operation • Describe remote replication technologies and their operation.

UNIT – V

9 hrs

• Define information security • List the critical security attributes for information systems • Define storage security domains • List and analyze the common threats in each domain • Identify key parameters and components to monitor in a storage infrastructure • List key management activities and examples • Define storage management standards and initiative.

TOTAL: 45 HOURS

TEXT BOOK:

1. EMC Corporation, Information Storage and Management, Wiley India, 788126521470, 2008.

REFERENCES

1. Robert Spalding, "Storage Networks: The Complete Reference", Tata McGraw Hill , Osborne, 2006.
2. Marc Farley, "Building Storage Networks", Tata McGraw Hill , Osborne, 2007.

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LIST OF ELECTIVES

ELECTIVE-I

BBC E61	PROFESSIONAL ETHICS IN ENGINEERING	3	0	0	3
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UNIT I ENGINEERING ETHICS

9 hrs

Senses of 'Engineering Ethics' – Variety of moral issues – Types of inquiry – Moral dilemmas – Moral Autonomy – Kohlberg's theory – Gilligan's theory – Consensus and Controversy – Professions and Professionalism – Professional Ideals and Virtues – Uses of Ethical Theories.

UNIT II ENGINEERING AS SOCIAL EXPERIMENTATION

9 hrs

Engineering as Experimentation – Engineers as responsible Experimenters – Research Ethics - Codes of Ethics – Industrial Standards - A Balanced Outlook on Law – The Challenger Case Study.

UNIT III ENGINEER'S RESPONSIBILITY FOR SAFETY

9 hrs

Safety and Risk – Assessment of Safety and Risk – Risk Benefit Analysis – Reducing Risk – The Government Regulator's Approach to Risk - Chernobyl Case Studies and Bhopal

UNIT IV RESPONSIBILITIES AND RIGHTS

9 hrs

Collegiality and Loyalty – Respect for Authority – Collective Bargaining – Confidentiality – Conflicts of Interest – Occupational Crime – Professional Rights – Employee Rights – Intellectual Property Rights (IPR) - Discrimination

UNIT V GLOBAL ISSUES

9 hrs

Multinational Corporations – Business Ethics - Environmental Ethics – Computer Ethics - Role in Technological Development – Weapons Development – Engineers as Managers – Consulting Engineers – Engineers as Expert Witnesses and Advisors – Honesty – Moral Leadership – Sample Code of Conduct

TOTAL: 45 HOURS

TEXT BOOKS:

1. Mike Martin and Roland Schinzinger, "Ethics in Engineering", McGraw Hill, New York (2005).
2. Charles E Harris, Michael S Pritchard and Michael J Rabins, "Engineering Ethics – Concepts and Cases", Thompson Learning, (2006).

REFERENCES:

1. Charles D Fleddermann, "Engineering Ethics", Prentice Hall, New Mexico, (2007).
2. John R Boatright, "Ethics and the Conduct of Business", Pearson Education, (2005)

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BIT473/ BBC E62	WIRELESS & MOBILE COMPUTING	3	1	0	4
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UNIT IWIRELESS COMMUNICATION FUNDAMENTALS 9 hrs

Introduction – Wireless transmission – Frequencies for radio transmission – Signals – Antennas – Signal Propagation – Multiplexing – Modulations – Spread Spectrum – MAC – SDMA – FDMA – TDMA – CDMA – Cellular Wireless Networks

UNIT IITELECOMMUNICATION NETWORKS 9 hrs

Telecommunication systems- GSM – GPRS – DECT – UMTS-IMT-2000 – Satellite Networks- Basics – Parameters and Configurations – Capacity Allocation – FAMA and DAMA – Broadcast Systems – DAB- DVB

UNIT IIIWIRELESS LAN 9 hrs

Wireless LAN – IEEE 802.11 – Architecture – services – MAC – Physical layer – IEEE 802.11a- 802.11b standards – HIPERLAN – Blue Tooth.

UNIT IVMOBILE NETWORK LAYER 9 hrs

Mobile IP – Dynamic Host Configuration Protocol – Routing – DSDV – DSR – Alternative Metrics.

UNIT VTRANSPORT AND APPLICATION LAYERS 9 hrs

Traditional TCP – Classical TCP improvements – WAP, WAP 2.0

TOTAL: 45 HOURS

TEXT BOOKS:

- 1) Jochen Schiller, “Mobile Communications”, Second Edition, PHI/Pearson Education, 2007.
- 2) William Stallings, “Wireless Communications and Networks”, PHI/Pearson Education, 2008.

REFERENCE BOOKS:

- 1) KavehPahlavan, PrasanthKrishnamoorthy, “Principles of Wireless Networks”,HI/Pearson Education, 2007.
- 2) UweHansmann, LotharMerk, Martin S.Nicklons and Thomas Stober, “Principles of Mobile Computing”, Springer, New York, 2005
- 3) HazysztowWesolowshi, “Mobile Communication Systems”, John Wiley and Sons Ltd, 2004.

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BBC E63	BUSINESS INFORMATION SYSTEMS	3	0	0	3
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UNIT – I

9 hrs

Introduction – Decisions – Value of Information – The idea of a system – Management Information Systems – Informal and formal information – The need for a business strategy – Strategic Business Planning – Business Information Systems Strategy – Information systems strategy today – Networks and distributed systems —Distribution of data –Effects of internet on business

UNIT – II

9 hrs

Internet and Financial Transactions – ecommerce business models – Business Intelligence from analyzing data and information – File structures –Record structures – Physical and logical views of data – Data storage , and lists –storage –Relational Models – Object Oriented Model

UNIT – III

9 hrs

The need for systems analysis and design - The need for structured approach to analysis and design – Life cycle of a system – Structured approach and the life cycle – Alternative approaches to information systems development – System analysis – Data flow diagrams – Data Dictionary – Decision tables - logic flowcharts

UNIT – IV

9 hrs

Top down versus bottom up approaches to data modeling – Entity Relationship Modelling – Data analysis and modeling - Process modeling and data modeling – Transition from analysis to design – suggests alternative designs – Walkthroughs and formal reviews

UNIT – V

9 hrs

Detailed Design – Systems specification – Implementation – Systems changeover – Evaluation and maintenance – Emergence of object oriented approaches- Static Modelling – Dynamic Modelling

TOTAL: 45 HOURS

TEXT BOOKS:

1.”Business Information Systems ,Analysis , Design and Practice”, Graham Curtis and David Cobham,Pearson Education Limited, 6th edition - 2008

REFERENCE BOOKS:

1. ”Business Information Systems ”, HD Clifton , DC Ince , AG Sutcliffe,Pearson Education Limited, 6th edition – 2008

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BBCE64	TAX MANAGEMENT	3	0	0	3
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UNIT I 9 hrs.

Fundamentals of Taxation- Direct and indirect taxes – Basic concepts – person, definition of income – agricultural Income- Different classes of Assessee - Assessment year - previous year. Residential status - Capital and Revenue Expenditure under Taxations - Exempted incomes.

UNIT II 9 hrs.

Computation of salary income- Definition, allowances, perquisite and profits in lieu of salary- Deduction U/S 80c

UNIT III 9 hrs.

Computation of income from house property-charging provisions - exempted house property- Different types of rental values-determination of ARV in different types of House property- Deductions U/S 24.

UNIT IV 9 hrs.

Computation of profit and gain of business or profession - Charging provisions - Deductions U/S 30 to 37 -Deemed profits - Computations of capital gains-Exemptions U/S 54 - Income from other sources, interest on securities.

UNIT V 9 hrs.

Set off and Carry forward of losses-Deductions in computation of Total income of individuals.

TOTAL: 45 HOURS

TEXT BOOKS

1. “Income Tax Law & Practice”, Gaur.V.P. & Narang.D.B., 1st Edition, Kalyani Publications, 2010.
2. Vinod K. Singhania & Kapil Singhania, Direct Taxes, 44th Edition, Taxman Allied Services Pvt.Ltd, 2010.

REFERENCE BOOKS

1. Girish Ahuja & Ravi Gupta, Direct Taxes Ready Reckoner, Bharat Law House Pvt. Ltd, 2010.

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BCSED5	TOTAL QUALITY MANAGEMENT	3	0	0	3
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UNIT I PRINCIPLES OF QUALITY MANAGEMENT

9 hrs

Definitions of quality, quality philosophies of Deming, Crosby and Miller, service vs. product quality, customer focus quality and business performance leadership for quality management, quality planning, designing for quality and manufacturing for quality, vision, mission statements, quality policy.

UNIT II TOTAL QUALITY MANAGEMENT

9 hrs

Evolution of TQM, TQM models, human and system components for continuous improvement strategies, Deming wheel, internal external customer concepts, customer satisfaction index, customer retention, team work and team building, empowerment, TQM culture, quality circle, 5S principles, top management commitment and involvement.

UNIT III QUALITY MANAGEMENT FOR BUSINESS APPLICATION

9 hrs

Principles and applications of quality functions deployment, failure mode and effect analysis, Taguchi techniques, 7 old QC tools, 7 new management tools, statistical quality control techniques, mistake proofing, benchmarking, 8D methodologies, IT and Kanban.

UNIT IV QUALITY IMPERATIVE FOR BUSINESS IMPROVEMENTS

9 hrs

Dimensions of quality, reliability prediction analysis, total productive maintenance cost of quality, business process re-engineering, process capability analysis, quality assurance and ISO 9000 and QS 9000 certifications.

UNIT V TQM IMPLEMENTATION STRATEGIES

9 hrs

Organizational structures and mind set of individuals, motivational aspects of TQM, change management strategies, training for TQM, TQM roadmap, quality improvement index.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Joel E Ross "TOTAL QUALITY MANAGEMENT", C R C Press LLC, 2005, 3/e.

REFERENCE BOOKS:

1. William J. Kolarik, "Creating Quality", McGraw Hill Inc, NY, 2006.
2. Jill A. Swift, Joel E. Ross and Vincent K. Omachonu, "Principles of Total Quality", CRC Press, 2004

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BBC E72	INFORMATION SECURITY	3	0	0	3
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UNIT I INTRODUCTION AND CRYPTO 9 hrs
Cryptobasics, Symmetric key Crypto, Public key crypto, Hash functions and Other Topics, Advanced Cryptanalysis

UNIT II ACCESS CONTROL 9 hrs
Authentication methods, Biometrics, Passwords, Authorization – Access control marix, Multilevel Security Models, Multilateral Security, Firewalls, CAPTCHA, Intrusion Detection.

UNIT III PROTOCOLS 9 hrs
Simple Authentication protocols, Real World Security protocols.

UNIT IV SOFTWARE 9 hrs
Software Flaws and Malware, Miscellaneous software attacks, Insecurity in Software, Software Reverse Engineering, Software Tamper Resistance, Digital Rights Management, Software Development.

UNIT V OPERATING SYSTEMS AND SECURITY 9 hrs
Operating Systems Security Functions, Trusted Operating Systems, Next Generation Secure Computing Base.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Information Security: Principles and Practice McGraw Hill Inc, NY, 2009.
2. Principles of Information Security Michael E. Whitman, Herbert J. Mattord, Pearson Education Limited, 6th edition - 2008

REFERENCE:

1. “Information Security Management Handbook”, Sixth Edition, Harold F. Tipton, Micki Krause, McGraw Hill Inc, NY, 2009.
2. “Information Security Risk Analysis”, Third Edition, Thomas R Peltier, Pearson Education Limited, 6th edition – 2007.

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BBC E73/ BCSE43	ECRM	3	0	0	3
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UNIT I – INTRODUCTION

9 hrs

Definition -CRM as a business strategy -Elements of CRM - CRM Processes and systems- Entrance, applications and success of CRM

UNIT II – STRATEGY AND ORGANIZATION OF CRM

9 hrs

Customer-supplier relationships - History - Description of customer-supplier relationships - Dynamic in relationships - Communities -*Case study*: The relation between a logistics serviceprovider and its new client

UNIT III-CRM AS AN INTEGRAL BUSINESS STRATEGY

9 hrs

Nature of the CRM strategy - Context of the CRM strategy - Results of a successful CRM strategy*Case study*: Orange Line

UNIT IV – CRM SYSTEMS AND THEIR IMPLEMENTATION

9 hrs

Overview of CRM systems - call centre - Internet and the website - Data warehouse and datamart - Campaign management systems - Content management system - Suppliers of CRM systems *Case study*: Canada Post delivers on its CRM strategy

UNIT V – ECRM

9 hrs

Meaning and definition- features of ECRM- Framework and Architecture- Building ECRMTools to maintain ECRM- Elements, types and process of Data mining- Applications of DataMining- Advantages of ECRM

TOTAL: 45 HOURS

TEXT BOOK

1. “Customer Relationship Management” ,Ed Peelen , Pearson Education,2007
- 2.” E-Commerce” – Pujawalia Mann, Nidhi MJP Publishers,2005

REFERENCE BOOK

1. “Data Mining Techniques in CRM”- Konstantinos Tsipis, Antonios Chorianopoulos Wiley InterScience, 2004.

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BBCE74	M - COMMERCE	3	0	0	3
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UNIT I ELECTRONIC COMMERCE 9 hrs

Traditional commerce and E-commerce – Internet and WWW – Role of WWW – Value Chains – Strategic Business And Industry Value Chains – Role of E-commerce. Packet Switched Networks – TCP/IP Protocol Script – Internet Utility Programmes – SGML, HTML And XML – Web Client And Servers – Web Client/Server Architecture.

UNIT II MOBILE COMMERCE 9 hrs

Introduction – Infrastructure of M–Commerce – Types Of Mobile Commerce Services – Technologies Of Wireless Business – Benefits And Limitations, Support, Mobile Marketing & Advertisement, Non– Internet Applications In M–Commerce – Wireless/Wired Commerce Comparisons.

UNIT III MOBILE COMMERCE: TECHNOLOGY 9hrs

A Framework For The Study Of Mobile Commerce – NTT Docomo’s I-Mode – Wireless Devices For Mobile Commerce – Towards A Classification Framework For Mobile Location Based Services – Wireless Personal And Local Area Networks .

UNIT IV MOBILE COMMERCE: THEORY AND APPLICATIONS 9 hrs

The Ecology Of Mobile Commerce – The Wireless Application Protocol – Mobile Business Services – Mobile Portal – Factors Influencing The Adoption of Mobile Gaming Services – Mobile Data Technologies And Small Business Adoption And Diffusion – E–commerce in The Automotive Industry – Location– Based Services.

UNIT V BUSINESS– TO– BUSINESS MOBILE E– COMMERCE 9 hrs

Enterprise Enablement – Email and Messaging – Field Force Automation (Insurance, Real Estate, Maintenance, Healthcare) – Field Sales Support (Content Access, Inventory) – Asset Tracking and Maintenance/Management – Remote IT Support – Customer Retention (B2C Services, Financial, Special Deals) – Warehouse Automation – Security.

TOTAL: 45 HOURS

TEXT BOOKS

1. E.BrianMennecke, J.TroyStrader, “Mobile Commerce: Technology, Theory and Applications”, Idea Group Inc., IIRM press, 2005.
2. Ravi Kalakota, B.AndrewWhinston, “Frontiers of Electronic Commerce”, Pearson Education, 2007.

REFERENCES

1. P. J. Louis, “M-Commerce Crash Course”, McGraw- Hill Companies February 2009.
2. Paul May, “Mobile Commerce: Opportunities, Applications, and Technologies Of Wireless Business” Cambridge University Press March 2006.

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BBC E75/ BCSED2	MANAGEMENT INFORMATION SYSTEMS	3	0	0	3
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UNIT I INTRODUCTION

9 hrs

Definition of MIS - Data Processing, Decision Support Systems - Information Resource Management, End User Computing Management, End User Computing Managerial Accounting, Or Management Theory, Sub-Systems of MIS.Data Base Query Languages,Report Generators, Statistical packages,modelinglanguages,V.H.L. Languages. Batch System, Online systems.Communication systems, Front End Processors, LAN, WAN, Distributed Systems.

UNIT II

9 hrs

Logical Data Concepts, Sequencing of Data, Types of files, data bases.Serial Access and Direct Access Devices.Sequential, Hashed and Indexed File Organization- Data Base Organizations - Single Flat File - Hierarchical, Network, Relational DB Structures.Transaction Processing - Controls and retrieval. Word and TextProcessing,Documentfiling,Computergraphics,Composition and Reproduction,DocumentDistribution,Fascimiletransmission,MessageSystems,Information Processing Control - Availability Controls.

UNIT III

9 hrs

Decision making process - Problem Formulation - Programmed vs Non-programmed decisions - Criteria for Decision making - Classical Economical Model – Administrative model - Resolution of Conflict - Uncertainty avoidance - Decision Trees - Game Theory - Statistical inference - Documenting and Communicating DecisionRules - Support for decision making phases.

UNIT IV

9 hrs

Hierarchy of Information - Redundancy - Sending and receiving efficiency - Utility of information - Errors and Bias - Value of information and Sensitivity Analysis – Information System Design.Typeso Systems - Subsystems - .Use of subsystems in Informational System Design - Decoupling of Information Systems - Project management.

UNIT V

9 hrs

Hierarchy of Planning - Planning of models - Computational Support for planning - Organizational Structure Implications and Management Theory in System Design – Decision Support Systems and Expert Systems - Computational Support for Intelligence, Design and Choice phases - Spread sheet processor -.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Gordon B.Davis and MargretheH.Olson, “Management Information Systems” , - McGraw Hill Editions – 3e,2004.

REFERENCE BOOKS:

- 1.RobertG.Murdrick,JoelE.Ross and James.R.Claggst, “InformationSystems for Modern Management”,3rd Edition 2006,PHI.
- 2.JeromeKanter, Management Information Systems”,3rd Edition,2007.PHI.

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ELECTIVE-III

BBC E81 /BCSE45	SERVICE ORIENTED ARCHITECTURE	3	0	0	3
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UNIT I – INTRODUCTION

9 hrs

Open Standards-Structure of SOA Applications- Web & Binary Exchange Services-Business Implications- Presentation Services- SOA Runtime products- Services: Loosecoupling- Service Registry-Service level agreements- Message exchange patterns- QOS

UNIT II – XML

9 hrs

Intro to XML-XML as used in SOA-Structure of an XML document-Namespaces-XMLSchema-Data type reuse- Instance document-Aspects of XPath- SOA standards: WSDL,SOAP, UDDI

UNIT III – BPEL

9 hrs

Use of WSDL, BPEL File structure-Scopes-Message Exchanges-Variables and XPath- Partner links-Correlation sets – fault handling-compensation and termination handlingconcurrency

UNIT IV – SCA

9 hrs

SCA Domain-Bindings & Enterprise service bus-policies and support for conversationscomponents-composites- higher and lower composites- composite inclusion-constrainingtype.

UNIT V – SDO

9 hrs

Data graph-object definition- SDO annotations-Data Access services- SDO code details.

TOTAL: 45 HOURS

TEXT BOOK:

1. “SOA for the Business Developer: Concepts”, BPEL, and SCA (Business Developers series) –Ben Margolis,2006.

REFERENCE BOOKS:

1. “Service Oriented Modelling (SOA) Service Analysis, Design and Architecture “– MichaelBell, 2006
2. “SOA Principles of Service Design “– Thomas Erl, 2005
3. “SOA Design Patterns” – Thomas Erl Prentice Hall Services, 2007.

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BBC E82 /BITE85	KNOWLEDGE MANAGEMENT	3	0	0	3
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UNIT I

9 hrs

Introduction: An Introduction to Knowledge Management - The foundations of knowledge management including cultural issues- technology applications- organizational concepts and processes- management aspects and decision support systems. The Evolution of Knowledge management: From Information Management to Knowledge Management - Key Challenges Facing the Evolution of Knowledge Management - Ethics for KnowledgeManagement.

UNIT II

9 hrs

Organization and Knowledge Management - Building the Learning Organization. Knowledge Markets:Cooperation among Distributed Technical Specialists - Tacit Knowledge and Quality Assurance.

UNIT III

9 hrs

Telecommunications and Networks in Knowledge Management - Internet Search Engines and Knowledge Management - Information Technology in Support of Knowledge Management - Knowledge Management and Vocabulary Control - Information Mapping in Information Retrieval - Information Coding in the Internet Environment – Repackaging Information.

UNIT IV

9 hrs

Components of a Knowledge Strategy - Case Studies (From Library to Knowledge Center,KnowledgeManagement in the Health Sciences, Knowledge Management in Developing Countries).

UNIT V

9 hrs

Advanced topics and case studies in knowledge management - Development of a knowledge management map/plan that is integrated with an organization's strategic and business plan - A case study on Corporate Memories for supporting various aspects in the process life -cycles of an organization.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Srikantaiah, T.K., Koenig, M., "Knowledge Management for the Information Professional, Information Today", Inc., 2007.
2. Nonaka, I., Takeuchi, H., "The Knowledge-Creating Company": Thomas Erl, 2005

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BBCE83	SUPPLY CHAIN MANAGEMENT	3	0	0	3
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UNIT I INTRODUCTION TO SUPPLY CHAIN MANAGEMENT 9 hrs

Supply chain – objectives – importance – decision phases – process view – competitive and supply chain strategies – achieving strategic fit – supply chain drivers – obstacles – framework – facilities – inventory – transportation– information – sourcing – pricing.

UNIT II DESIGNING THE SUPPLY CHAIN NETWORK 9hrs

Designing the distribution network – role of distribution – factors influencing distribution – design options – e-business and its impact – distribution networks in practice – network design in the supply chain – role of network–factors affecting the network design decisions – modeling for supply chain.

UNIT III DESIGNING AND PLANNING TRANSPORTATION NETWORKS. 9 hrs

Role of transportation - modes and their performance – transportation infrastructure and policies - design options and their trade-offs – Tailored transportation. supplier scoring and assessment, selection – procurement process – sourcing planning and analysis.

UNIT IV INFORMATION TECHNOLOGY IN THE SUPPLY CHAIN 9 hrs

Framework – customer relationship management – internal supply chain management – supplier relationship management –transaction management – future of IT.Lack of supply chain coordination and the Bullwhip effect – obstacle to coordination – managerial levers – building partnerships and trust – continuous replenishment and vendor-managed inventories – collaborative planning, forecasting and replenishment.

UNIT V DIMENSIONS OF LOGISTICS 9 hrs

Introduction: A macro and micro dimension – logistics interfaces with other areas – approach to analyzing logistics systems – logistics and systems analysis – techniques of logistics system analysis – factors affecting thecostand importance of logistics.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Sunil Chopra and Peter Meindl, “Supply Chain Management – Strategy, Planning and Operation”, Pearson/PHI, 3rd Edition, 2007.
2. “Supply Chain Management” by Janat Shah Pearson Publication 2008.

REFERENCE BOOKS:

1. Donald J Bowersox, Dand J Closs, M Bixby Coluper, “Supply Chain Logistics Management”, TMH, Second Edition, 2008.
2. Wisner, Keong Leong and Keah-Choon Tan, “Principles of Supply Chain Management A Balanced Approach”, Thomson Press, 2005.
3. David Simchi-Levi et al, Designing and Managing the Supply Chain – Concepts,2004.

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BBC E84 /BITE86	CLOUD COMPUTING	3	0	0	3
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UNIT – I INTRODUCTION 9 hrs

Cloud Computing Introduction, From, Collaboration to cloud, Working of cloud computing, pros and cons, benefits, developing cloud computing services, Cloud service development, discovering cloud services.

UNIT – II CLOUD COMPUTING FOR EVERYONE 9 hrs

Centralizing email communications, cloud computing for community, collaborating on schedules, collaborating on group projects and events, cloud computing for corporation, mapping schedules managing projects, presenting on road.

UNIT – III USING CLOUD SERVICES 9 hrs

Collaborating on calendars, Schedules and task management, exploring on line scheduling and planning, collaborating on event management, collaborating on contact management, collaborating on project management, collaborating on word processing, spreadsheets, and databases.

UNIT – IV OUTSIDE THE CLOUD 9 hrs

Evaluating web mail services, Evaluating instant messaging, Evaluating web conference tools, creating groups on social networks, Evaluating on line groupware, collaborating via blogs and wikis

UNIT – V STORING AND SHARING 9 hrs

Understanding cloud storage, evaluating on line file storage, exploring on line book marking services, exploring on line photo editing applications, exploring photo sharing communities, controlling it with web based desktops.

TOTAL: 45 HOURS

TEXT BOOKS:

1. Michael Miller, “ Cloud Computing”, Pearson Education, New Delhi, 2009

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BBC E85/ BIT475	SOFTWARE PROJECT MANAGEMENT	3	0	0	3
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UNIT I INTRODUCTION TO SOFTWARE PROJECT MANAGEMENT 9hrs

Project Definition – Contract Management – Activities Covered By Software Project Management – Overview Of Project Planning – Stepwise Project Planning.

UNIT II PROJECT EVALUATION 9 hrs

Strategic Assessment – Technical Assessment – Cost Benefit Analysis –Cash Flow Forecasting – Cost Benefit Evaluation Techniques – Risk Evaluation.

UNIT III ACTIVITY PLANNING 9 hrs

Objectives – Project Schedule – Sequencing and Scheduling Activities –Network Planning Models – Forward Pass – Backward Pass – Activity Float – Shortening Project Duration – Activity on Arrow Networks – Risk Management – Nature Of Risk – Types Of Risk – Managing Risk – Hazard Identification – Hazard Analysis – Risk Planning And Control.

UNIT IV MONITORING AND CONTROL 9 hrs

Creating Framework – Collecting The Data – Visualizing Progress – Cost Monitoring – Earned Value – Prioritizing Monitoring – Getting Project Back To Target – Change Control – Managing Contracts – Introduction – Types Of Contract – Stages In Contract Placement – Typical Terms Of A Contract – Contract Management – Acceptance.

UNIT V MANAGING PEOPLE AND ORGANIZING TEAMS 9 hrs

Introduction – Understanding Behavior – Organizational Behaviour:A Background – Selecting The Right Person For The Job – Instruction In The Best Methods – Motivation – The Oldman – Hackman Job Characteristics Model – Working In Groups – Becoming A Team –Decision Making – Leadership – Organizational Structures – Stress – Health And Safety – Case Studies.

TOTAL: 45 HOURS

TEXT BOOK:

1. Bob Hughes, Mikecatterell, “Software Project Management”, Third Edition, TataMcGraw Hill, 2004.
2. Ramesh, Gopalaswamy, "Managing Global Projects", Tata McGraw Hill,2005.

REFERENCES:

1. Royce, “Software Project Management”, Pearson Education, 2007.
2. Jalote, “Software Project Manangement in Practice”, Pearson Education, 2008.