

**MANONMANIAM SUNDARANAR UNIVERSITY
TIRUNELVELI**

UG COURSES – AFFILIATED COLLEGES
B.Sc. Information Science and Management (CBCS)

(Choice Based Credit System)
(With effect from the academic year 2017 -2018)

III Semester			
Category of subjects	Title of the subjects	Contact Hrs/week	Credits
Core	Major – III Principles of Management	5	4
	Major – IV Object Oriented Programming with C++	4	4
	Major Practical – III Object Oriented Programming with C++ Lab	6	4
Part III	Skill Based Core Subject – I	6(2T+4P)	4
Part IV	Non – Major Elective – I	2	2
	Common Yoga	--	2
	Allied Subject – III Theory – Accountancy	3	3
	Allied Practical –III Accountancy (Tally)	4	2
Total		30	25

IV Semester			
Category of subjects	Title of the subjects	Contact Hrs/week	Credits
Core	Major – V Java Programming	5	4
	Major Practical – IV Java Programming Lab	6	4
	Major – VI Operating System	4	4
Part III	Skill Based Core Subject – II	6(2T+4P)	4
	Computers for Digital Era	--	2
Part IV	Non – Major Elective – II	2	2
	Allied Subject – IV Operations Research & Numerical Analysis	3	3
	Allied Practical – IV Linux	4	2
Part V	Extension Activity	--	1
Total		30	26

T-TUTORIAL

P-PRACTICAL

V Semester			
Category of subjects	Title of the subjects	Contact Hrs/week	Credits
Core	Major–VII Relational Database Management System	5	4
	Major – VIII Software Engineering	4	4
	Major – IX Marketing Management	4	4
	Major Practical – V Relational Database Management System Lab	6	4
	Major Elective – I (Group – A)	4	4
Part IV	Skill Based Subject Common – Personality Development /Effective communication/Youth Leadership	2	2
	Mini Project	5	4
Total		30	26
VI Semester			
Part III Core	Major – X Data Communications And Networking	4	4
	Major – XI Enterprise resource Planning	4	4
	Major – XII .Net Programming	5	4
	Major Practical – VI .Net Programming Lab	6	4
	Major Elective – I (Group – B)	4	4
	Major Project	7	7
Total		30	27

Major Elective	
Major Elective – I (Group – A)	Mobile Computing
	Wireless Application Protocol
	Internet Security
Major Elective – II (Group – B)	Human Resource Management
	Financial Management
	E-Commerce

Semester III
MAJOR THEORY
PRINCIPLES OF MANAGEMENT

L T P C
4 0 0 4

PREAMBLE

- To study the planning and decision making.
- To know about the organization and staffing.
- To learn about directing and controlling.
- Outcome : knowledge in process planning , decision making, organising & controlling will be developed.

Unit – I

INTRODUCTION : PRINCIPLES & THINKERS – Definition – Features of Management – Administration Vs Management – Management a Science or Art? – Management a Profession – Management Principles & their nature – University of Management Principles – The functional approach to Management – Management function and Management levels – Pioneers of Modern Management – F.W. Taylor – Elton Mayo – M.P. Follet.

(12hrs)

Unit – II

PLANNING AND DECISION MAKING : Meaning – Characteristics – Planning Process – Types of Plans Objectives – M.B.O. – Policies – Procedures – Methods – Rules – Programmers – Budgets – Forecasting – Elements – Techniques – Decision Making – Definition – Nature & Types of Decisions – Process.

(12hrs)

Unit – III

ORGANISING : Meaning – Principles of Organization – Departmentation – It's Methods – Span of Management – Forms of Organization structure – Concepts of Authority and responsibility – Delegation & Decentralisation of Authority – Centralization Vs Decentralization – Advantages & Drawbacks – Line & Staff relation.

(12hrs)

Unit – IV

STAFFING : Meaning – Manpower Planning – Aim and Objectives – Steps in Manpower Planning – Recruitment – Selection – Training – Performance Evaluation – Executive Development.

(12hrs)

Unit – V

DIRECTING & CONTROLLING : Definition – Principles & Elements of Direction – Importance of Controlling – Steps in Controlling – Essentials of Control – Techniques.

(12hrs)

Text Books :

1. L.M. Prasad – Principles & Practices of Management – Sixth Edition – 2001 – Sultan Chand And Sons.

Reference :

1. Herold Koontz, Weihrich – Management – Ninth Edition – 1988 – McGraw Hill Book co.
2. James A.F.Stoners – R.Edward Freeman – Management – Fifth Edition – 1992 – Prentice Hall India (P) Ltd.
3. Govindarajan&Natarajan – Principles of Management – Prentice Hall India (P) Ltd.

MAJOR THEORY – OBJECT ORIENTED PROGRAMMING WITH C++

L T P C

5 0 0 4

Preamble:

- C++ Programming by examples can be used as an alternative approach to learn the language, by putting practice over theory.
- In any case this will require you to have greater level of expertise. You will need to understand how C++ files are organized, have and know how to operate a compiler and understand some nuances that will not be visible in code.
- To understand that you will be able to read and program in C++, to some degree but to get to really understand the language, theory, not only practice, is required. Use the primary book as a reference anytime you have a doubt.
- Outcome : students will be able to write programme in C++

Unit – I

Introduction to C++ : Evolution of C++ - ANSI Standard – Object Oriented Technology – Disadvantage of Conventional Programming – Programming Paradigms – Preface to Object – Oriented Programming – Key Concepts of Object – Oriented Programming – Advantages of OOP – Object Oriented Languages.

Input and Output in C++ : Streams in C++ - Pre-Defined Streams – Buffering – Stream Classes – Formatted and Unformatted Data – Unformatted Console I/O Operations – Typecasting with cout Statement – Member Functions of Istream Class – Formatted Console I/O Operations.

C++ Declarations : Parts of C++ Program – Types of Tokens – Keywords – Identifiers – Dynamic Initialization – Data Types in C++ - Basic Data Type – Derived Data Type – User – Defined Data Type – The void Data Type – Type Modifiers – Wrapping Around – Typecasting – Constants – Constant Pointers – Operators in C and C++ Precedence of Operators in C++.

(15hrs)

Unit – II

Control Structures : Decision – Making Statements – The if-else Statements – The jump Statement – The goto Statement – The break Statement – The Continue Statement – The switch case statement – Loops – The for Loop – Nested for Loops – The While Loop – The do-while Loop.

Functions in C++ : The main() Function – Parts of Function – Passing Arguments – L Values and R Values – Return by Reference – Default Arguments – Inline Functions – Function Overloading – Principles of Function Overloading – Library Functions.

(15hrs)

Unit – III

Classes and Objects : Classes in C++ Declaring Objects – The Public Keyword – The Private Keyword – The protected keyword – Defining Member Functions – Data Hiding or Encapsulation – Classes, Objects and Memory – Static Member Variables and Functions – Static Object – Array of Objects – Objects as Functions Arguments – Friend Functions – Recursive Member Function – Local Classes – The main() as a Member Function – Overloading Member Functions – Overloading main() Function.

Constructor and Destructors : Characteristics of Constructors and Destructors – Applications with Constructors – Constructors with Arguments – Overloading Constructors – Constructor with Default Argument – Copy Constructors – The const Object – Destructors – Calling Constructor and Destructors – Qualifier and Nested Classes – Anonymous Objects – Recursive Constructor – Local vs Global Object.

(15hrs)

Unit – IV

Operator Overloading and Type Conversion : The Keyword Operator – Overloading Unary Operators – Operator Return Type – Constraint on Increment and Decrement Operators – Overloading Binary Operators – Type Conversion – Rules for Overloading Operators.

Inheritance : Access Specifiers and Simple Inheritance – Types of Inheritances – Single Inheritance – Multilevel Inheritance – Multiple Inheritance – Virtual Base Classes.

Pointers and Arrays : Pointer Declaration - Pointer to Class – Pointer to Object – The this Pointer – Base Classes – Arrays – Characteristics of Arrays – Arrays of Classes.

(15hrs)

Unit – V

C++ and Memory : Memory Models – The New and delete Operators – Dynamic Objects.

Binding, Polymorphism and Virtual Functions : Binding in C++ - Virtual Functions – Rules for Virtual Functions – Pure Virtual Functions – Abstract Classes – Working with Virtual Functions.

Applications with Files : File Stream Classes – Steps of File Operations – Finding End of a File – File Opening Modes – File Pointer and Manipulators – Manipulators with Arguments – Sequential Read and Write Operations- Binary and ASCII Files – Random Access Operations.

(15hrs)

Text Book :

1. Ashok N.Kamthane, “Object Oriented Programming with ANSI and Turbo C++”, Pearson Education, New Delhi.

Reference :

1. Herbert Schildt, “C++ : The Complete Reference” Tata McGraw Hill Publishing Company Limited, New Delhi.
2. E. Balagurusamy, “Object- Oriented Programming C++”, Tata McGraw Hill Publishing Company Limited, New Delhi.
3. D. Ravichandran, “Programming with C++”, Tata McGraw Hill Publishing Company Limited, New Delhi.

MAJOR PRACTICAL – III LIST

1. Write a C++ Program to declare all members of a class as public. Access the element using objects.
2. Write a C++ Program to print sum of sin series.
3. Write a C++ Program to calculate simple interest. Hide the data element of the class using private keyword.
4. Write a C++ Program to show difference between static and non-static member variables.
5. Write a C++ Program to declare array of objects. Initialize and display the contents of array.
6. Write a C++ Program to access private data using non-member function. Use friend function.
7. Write a C++ Program to create a class MAT of size of m x n. Define the matrix operations addition, subtraction, input and output by overloading +, -, >> and << operators respectively.
8. Write a C++ Program to create an abstract class 'Queue'. Create two subclasses 'StaticQ' and 'DynamicQ'. Class 'Queue' contains member functions insert, delete, create, isempty, isfull and display functions. DynamicQ overrides insert to change size of queue at runtime if queue is already full.
9. Write a C++ Program to overload member function of class.
10. Write a C++ Program to invoke constructor and destructor.
11. Write a C++ Program that overload + & relational (suitable) operator to perform the following operations.
 - i) Concatenation of two Strings
 - ii) Comparison of two Strings
12. Write a C++ Program to create multilevel inheritance. Create classes A1, A2 and A3.

13. Write a C++ Program to derive a class student from multiple base classes mark and sports. Print the details of the student including percentage.
14. Write a C++ Program to show hierarchical inheritance.
15. Write a C++ Program to declare an object and pointer to the class. Invoke member functions using pointer.
16. Write a C++ Program to create a class employee that contain two functions getdata() &putdata(). Create array of objects for the specified class and read the values using getdata(). Print the values using putdata().
17. Write a C++ Program to print the details vehicle using virtual function. Create a class vehicle and have a virtual function make(). Create another class two wheeler is inherited from vehicle class that invoke the virtual function make(). Print details of two wheeler. Create another class four wheeler is inherited from the two wheeler that invoke virtual function make(). Print details of four wheeler.
18. Write a program to read a line of text and replace one word with another word.
19. Write a C++ Program function template for finding the minimum value contained in an array.
20. Write a C++ Program to perform read and write operations with objects using write() and read() functions.

**ALLIED THEORY– III
ACCOUNTANCY**

**L T P C
3 0 0 3**

PREAMBLE

- To study about book keeping system.
- To learn about cost accounting and depreciation.
- To know about marketing management and inventory control.
- Outcome: Students obtain skills in preparation of trail balance,& objective of business

Unit – I

Accounting : Definition and functions – Accounting Conventions Concepts – System of Accounting – Rules for Double Entry System of Book Keeping – Preparation of Journal and Ledger Accounting.

(9hrs)

Unit – II

Subsidiary Books : Purchase Book – Sales Book – Purchase Return Book – Sales Return Book – Cash Book – Bank Reconciliation Statement (BRS).

(9hrs)

Unit – III

Preparation of Trail Balance : Final Accounts – Manufacturing, Trading, Profit and Loss Accounts and Balance Sheet with Simple Adjustments.

(9hrs)

Unit – IV

Depreciation : Methods of Depreciation – Straight Line Method and Diminishing Balance Method. Cost Accounting – Elements of Costing – Type of Costing – Preparation of Simple Cost Sheets – Labor Cost Accounting.

(9hrs)

Unit – V

Nature and Objectives of Business : Internal Organizational structure of Business – Unit Marketing Management and its Functions – Production Management – Objectives and Functions – Quality Control, inventory control – Personnel Management, Objectives and Functions.

(9hrs)

Text Book :

1. T.S. Greewal, Introduction To Accountancy, S. Chand & Company, New Delhi.
2. Jain & Narang, Cost Accountancy, Kalyani Publishers, Ludhiana.
3. Y.K. Bhusan, Business Organization And Management.

Reference Book :

1. Khan and Jain “Financial Management” Tata McGraw Hill.

ALLIED PRACTICAL – III

ACCOUNTANCY TALLY LAB LIST

L T P C
0 0 4 2

1. Specimen journal entries of Bills of exchange.
2. Model journal entries of joint venture and books of accounts.
3. Bank reconciliation statements.
4. Comparison of Pass Book and Cash Book.
5. Prepare an average due date.
6. Creation of Sales day book
7. How to create Balance Sheet.
8. Create a Sales invoices.
9. Create a Company as “Sagar Industries Ltd.” In tally with inventory management.
10. Create the Trail Balance and Balance Sheet of “Sugar Industries Ltd”.
11. Show the Cash Book and Bank Book for the company.

SEMESTER – IV

MAJOR THEORY – JAVA PROGRAMMING

L T P C

PREAMBLE

- To enable the students to design and develop enterprise strength distributed and multi-tier applications using Java Technology.
- To enable the students to learn advanced Java programming concepts like interface, threads, applets etc, and to develop network programs in Java.
- Outcome: Basic ideas of JAVA programming will be obtained.

Unit – I

The Genesis of Java : Overview of Java – Development of Java – JDE – Data Types – Variables – Arrays – Type Conversion and Casting – Operators – Precedence – Control Statements.

(15hrs)

Unit – II

Introduction Classes : Objects – OOPs Concepts – Declaring Objects – Introducing Methods – Constructors – Overloading – this keyword – Garbage Collection – finalize () method – More Examples.

Objects as parameters – returning objects – recursion – Access Control – Static – Final – Nested and Inner Classes – Command Line Arguments – Sample Programs.

(15hrs)

Unit – III

String and String Buffer Class Inheritance : Types of Inheritance – Method Overriding – Dynamic method Dispatch – Abstract Class – Final with Inheritance – More Examples.

Packages – Access Protection – Importing Packages – Interfaces – Implement and Applying Interfaces – Sample Programs.

(15hrs)

Unit – IV

Exception Handling: Exception Types – Our Own Exception – Handling Exception – Java's Built in Exception – Thread Class and Runnable Interface – Extending Thread – Creating Multiple Threads – isAlive () and join() methods – Synchronization – suspend (), resume () and stop() threads – Example Programs.

I/O packages – Input Stream – Output Stream – File Input and Output Stream – Applet Class – An Applet Skeleton – Simple Applet Display Methods – Example Programs.

(15hrs)

Unit – V

Event Handling : Delegation Event Model – Event Classes – Sources of Events – Event Listener Interface – AWT Controls – Labels – Buttons – Check Boxes –

Check Box Group – Lists – Scroll Bar – Text Area – Menu Bars and Menu –
Layout Managers – Examples.

(15hrs)

Text Book :

1. Herbert Schildt, “Java 2” Fourth Edition, Tata McGraw – Hill Publishing
Company Ltd, New Delhi.

Reference :

1. Peter Norton and William Stanek, “Guide To Java Programming”,
Techmedia, New Delhi.
2. Martin Rinehart, “Java Database Development” Ed – 1998, Tata McGraw –
Hill Publishing Company Ltd, New Delhi.

**MAJOR PRACTICAL – IV
JAVA PROGRAMMING – LAB LIST**

L T P C

0 0 6 4

1. Create a Simple program with your own detail.
2. Use Overload i) Method ii) Constructor
3. Create a Program for object as parameters and returning objects.
4. Create a program with abstract class.
5. Create a program using Multilevel Inheritance.
6. Develop a Program using Interface.
7. Create and Import Package (Minimum Three Classes)
8. Create Our Own Exception for Employees.
(Constraints 1.Age > 18 and < 58 2.Dept No. 10 || 20 || 30 || 40)
9. Suspend, Resume and Stop Threads (Minimum 3 Threads)
10. Read and Write the content of a file using I/O Packages.
11. Display a Simple Banner Applet.
12. Event Handling Mechanism for Keyboard and Mouse .
13. Create a Login form.
14. Simple Web Presentation using HTML Tag (Use 3 Pages)
15. Create a Program for Moving Ball (Start and Stop)
16. Create a Simple Java Database with 4 fields.

**MAJOR THEORY
OPERATING SYSTEM**

**L T P C
4 0 0 4**

PREAMBLE

- To have a thorough knowledge of processes, scheduling concepts, memory management, I/O and file management systems in an operating system.
- To learn about unix and linux operating system.
- Outcome: Students will obtain knowledge in information, memory, & interprocess communication management of operating system.

Unit – I

Operating System : What is an Operating System? – Computing System Architecture : Desktop Systems – Multiprocessor Systems – Distributed Processing – Cluster Systems – Hand held Systems – Functions and Structure – Difference services of the Operating System – Users of system Calls – issue of portability – users view of the operating system – Graphical user interface – Operating System Structure – virtual machine – booting.

(11hrs)

Unit – II

Information Management : File System – Device Driver – Terminal I/O – CD – ROM. Process Management : Introduction – What is process? Evolution of multiprogramming – Context Switching – Process States – Process State Transitions – Process Control Block – Process hierarchy – Operation on a process – create a process – kill a process – dispatch a process – change the priority of a process – Block a process – dispatch a process – time up a process wake up a process – Suspend/resume operation – Process Scheduling – Multithreading.

(13hrs)

Unit – III

InterProcess Communication : the producer/Consumer Problems – solutions to the producer – consumer problems – Classical IPC problems. Deadlocks : Introduction – Graphical representation of deadlock – deadlock prerequisites – deadlock strategies.

(12hrs)

Unit – IV

Memory Management : Introduction – Single Contiguous memory management – fixed partition memory management – variable partitions – non contiguous allocation – paging – segmentation – combined system – virtual memory management system.

(12hrs)

Unit – V

Information Management : File System – Device Driver – Terminal I/O – CD – ROM. Case Study : LINUX – Introduction – UNIX and LINUX : A Comparison –

Process Management – Process Scheduling – Memory Management – File Management – Device Drivers – Security.

(12hrs)

Text Book :

1. Operating Systems – Achyut S Godbole, Tata McGraw – Hill Publishing Company, New Delhi, 2nd Edition, 2005.
2. Operating System – Harvey M. Deitel, Paul J Deitel. David R. Choftness, Third Edition, Pearson.

Reference :

1. Operating Systems, Internals and Design Principles, William Stallings, PHI, 2008.
2. Operating System Concepts – Silverschatz and Galvin, 6th Edition, John Wiley & Sons, Inc., 2004.
3. An Introduction to Operating Systems – Concepts and Practice, Pramod Chandra P. Bhatt, Prentice Hall of India, 2007.

ALLIED THEORY IV

OPERATION RESEARCH AND NUMERICAL ANALYSIS

L T P C

PREAMBLE

- To know about transportation and assignment problems in Operation Research
- To solve sequencing problem and simultaneous equations.
- Outcome : Students will able to solve Transportation Problem, Assignment Problem, & Sequencing Problem.

Unit – I

Transportation Problem : Introduction – General Transportation Problem – The Transportation Table – Formulation of the Transportation Problem – Triangular Basis in a Transportation Problem – Finding an initial basic feasible solution : North West Corner rule – Least – Cost Method or Matrix Minima Method – Vogel's Approximation Method.

(10hrs)

Unit – II

Assignment Problem : Introduction – Mathematical formulation of the problem – The Assignment method – The Travelling Salesman Problem.

(8hrs)

Unit – III

Sequencing Problem : Introduction – Problem of Sequencing – Basic Terms used in sequencing – Processing n jobs through two machines – Processing n jobs through k machines – Processing 2 jobs through k machines.

(9hrs)

Unit – IV

Simultaneous equations : Back substitutions – Gauss Jordan elimination method – Calculation of inverse of a matrix – Gauss – Seidel iteration method.

(9hrs)

Unit – V

Difference Operators : Newton's interpolation formula – Lagrange's interpolation formula – Divide difference interpolation – Inverse interpolation.

(9hrs)

Text Books :

1. KantiSwarup, P.K. Gupta and Man Mohan, "Operations Research", Sultan Chand A Sons, New Delhi – Unit I, II and III.
2. S. Arumugam, A. Thangapandilssac and A. Somasundaram, "Numerical Analysis", New Gamma Publishing House, Palayamkottai – Unit IV & V.

Reference :

1. T. Sankaranarayanan, Joseph A. Mangaladoss, "Operations Research", Suja Publishing House, Tirunelveli.
2. R. Panneerselvam, "Operations Research", 2nd Edition, PHI Learning (2011), New Delhi.
3. Vasishtha, "Numerical Analysis", Krishna Prakashan Media (P) Ltd. (2010), Meerut.

**LINUX – LAB LIST
(Allied – IV Practical)
LINUX**

**L T P C
0 0 4 2**

Objective: To understand and make effective use of Linux utilities and Shell scripting language to solve problems

Each exercise should be completed within three hours. It is compulsory to complete all the exercises given in the list in the stipulated time.

1. Use any text editor in linux(say vi) to enter a C program to find the largest of three numbers, compile using gcc and display the output.
2. Use any text editor in linux(say vi) to enter a C program to find the factorial of a given number, compile using gcc and display the output.
3. Linux commands
 - a. ls, mkdir, rmdir, cd, pwd, find, du(Directory oriented)
 - b. cat, cp, rm, mv, wc (File oriented)
 - c. ps, kill, batch, grep(Process oriented)
 - d. write, mail, wall (Communication oriented)
4. Linux commands
 - a. date, who, who am i, man, cal, echo, bc(General purpose)
 - b. Pipe, Filter
5. Write a shell script to display date in the mm/dd/yy format, time, username and current directory.
6. Write a shell script to find the sum of digits of a given number.
7. Write a program to generate Fibonacci series.
8. Write a program to check whether given string is palindrome or not
9. Write a shell script to find factorial of a given integer.
10. Write a shell script to generate mark sheet of a student. Take 3 subjects, Calculate and display total marks, percentage and Class obtained by the student.

Reference Books:

1. Linux: A practical approach, B. Mohamed Ibrahim, Firewall Media
2. Comdex Linux and Open Office course kit revised and upgraded, Gupta, Wiley India.
3. A practical guide to Linux command, editors, and shell programming 2/e; Mark G Sobell, Prentice Hall.
4. Linux Lab - Open source Technology : Ambavade - Dreamtech

SEMESTER - V

**MAJOR THEORY
RELATIONAL DATA BASE MANAGEMENT SYSTEM**

Preamble

- The area of relational database management system is crowded with a vast number of quality products..
- This paper aims to provide the students a strong foundation in database technology and to learn the fundamentals of data models to make a study of SQL and relational database design.
- Outcome: Knowledge about design RDBMS,SQL,PL/SQL will be obtained.

Unit - I

Introduction : Purpose of Database Systems – Data Models – Database Languages – Transaction Management – Storage Management – DBA – Database Users – System Structure. E-R Model – Entities and Entity sets – Relationship Sets – Mapping Constraints – E-R Diagram.

(15hrs)

Unit – II

Structure of Relational Databases : Relational Algebra – Tuple Relational Calculus – Domain Relational Calculus – Integrity Constraints – Normalization – Boyce – Codd Normal Form – Third Normal Form – Fourth Normal Form – Domain – Key Normal Form.

(15hrs)

Unit – III

Basic SQL Operations : Creating a Table – Insert – Rollback – Commit – Auto commit – Delete – Update – Select, From, Where and Order by – Single value tests – Single value tests – LIKE – Simple tests against a list of values – Combining Logic – Dropping tables – Dropping a Column – Creating a table from a table – Data Functions – Conversation functions – Translate – Decode – Creating a view – Advanced Sub queries – Outer Joins – Natural and Inner Joins – Union, Intersect & Minus – Synonyms – Indexes – Tables space – Clusters – Sequences.

(15hrs)

Unit – IV

Basics of Object : Relational Databases : Objects – Abstract Data Types – Nested tables – Varying arrays – Large Objects – References Object Views – Naming conventions for objects – structure of an object – Users, Roles and Privilege : Creating a user – Password management – Three Standard roles – Format for grant command – Revoking privileges – What users can Grant : Moving to another user – Create Synonym – Create a role – Granting privileges to a role – Granting a role to another role – Adding Password to a role – Removing password from a role – Enabling & Disabling Roles – Revoking Privilege from a role – Drop role.

(15hrs)

Unit - V

An Introduction to PL/SQL : PL/SQL Overview – Declaration section – Executable commands section – Exception handling Section – Triggers : Syntax – Types of Triggers : Row – Level – Statement – Level – before & after – Instead of Schema – Database – Level Triggers – Enabling & Disabling Triggers – Replacing & Dropping Triggers – Procedures, Functions & Packages : Syntax – Compile – Replace – Drop Procedure, Functions & Packages – Cursor Management.

(15hrs)

Text Books:

1. Abraham Silberschatz, Henry F.Korth, S.Sudarshan “Database System Concepts” McGraw – Hill Education, 2010.
2. Kevin Loney, George Koch And the Experts at TUSC, “ORACLE 9i The Complete Reference”, Tata McGraw – Hill Publishing Company Ltd., New Delhi.
3. Database Systems RamezElmasri, Shankant B. Navathe – 6th Edition – Pearson.

Reference :

1. Rajesh Narang – “Database Management Systems”, PHI Learning Pvt. Ltd., 2006.
2. Raghu Ramakrishnan, Johannes Gehrke, “Database Management Systems”, McGraw – Hill Education, 2002.
3. Michael Abbay, Mike Corey, Ian Abramson, “ORACLE 9i A Beginner’s Guide”, TataMcGraw – Hill Publishing Company Ltd., New Delhi, 2002.
4. The Database Application Book using the MYSQL Database Gehani – Universities Press.

MAJOR PRACTICAL

L T P C

RELATIONAL DATA BASE MANAGEMENT SYSTEM – LAB LIST

1. Create a simple table and write three queries to process a table.
2. Demonstrate query processing using aggregate operators.
3. Write oracle code for demonstrating the correlated sub queries.
4. Write oracle code to create employee records and delete the retired employees and store it on to another table with same structure.
5. Create a course table and create a procedure that displays the instructor details, class details and student details of a particular table which the user inputs.
6. Write a database trigger before insert for each row on the course table not allowing transactions on Sundays and Saturdays.
7. Create a package that contains overloaded functions for
 - i. Adding five integers
 - ii. Subtracting two integers
 - iii. Multiplying three integers
8. Write PL/SQL block to increase the salary by 10% if the salary is > 2500 and < 3000.
9. Write PL/SQL block to display the names of those employee getting salary > 3000. Create and insert records into the following tables. (Insert minimum 10 records in each table).
10. Create Student information table.
11. Create Department information table.
12. Create Instructor's information table.
13. Create Course information table.
14. Create Schedule type details.
15. Create Student grade information table in PL/SQL.

Preamble

- To learn the methodologies involved in the development and maintenance of software over its entire life cycle and
- To understand the concepts of modeling, implementation and various testing strategies and the use of CASE Tools.
- Outcome : Obtain knowledge in software development process, testing & maintenance as well as CASE Tools.

Unit – I

Software Engineering : Definition ,Software Engineering Activities, Skills and challenge – Components of Software Engineering : SSAD and OOSAD – Software Life Cycle Model – Software Development Model – CMM for Process Improvement- Software Process Model – Software Estimation : Size Effort and Cost : Software Metrics : Introduction – Estimation of Effect and Schedule – COCOMO – Software Cost Estimation.

(13hrs)

Unit – II

Software Quality Assurance : Testing Techniques for SQA – Software Testing Strategies – Software Engineering Tools – Introduction – Analysis Tools – Requirements Engineering – Work Breakdown Structure – Prototyping – System Analysis – System Modeling – Structure System Analysis – Software Requirement Specification.

(11hrs)

Unit – III

System Design : Introduction – Data Structure and Database Design- Design Development Process – System Design Architecture – System Behavior design – Architecture and Choices – Architecture and Non – Functional Requirements – Design Specification Documentation – User Interface Design – User Interface Analysis and Design – Guidelines for Designing UI Components – Procedural Design.

(11hrs)

Unit – IV

Object Oriented Approach and Technology : Basis of Objects – Object Properties – Object Oriented System Development Cycle – UML – Static Class Diagrams – Use Case Diagrams – Behavior Diagrams.

(12hrs)

Unit – V

Software Project Management : Introduction -- Basic Concepts – Project Management – Software Development Process Management – Management of Software Workflows – Evaluation of Workflow Process – Integration of Software Engineering Management and Project Life Cycle – Testing for Quality – Functional Testing – System Testing – User Satisfaction Testing – Test Cases and Test Plans – Software System Maintenance.

(13hrs)

Text Book :

1. Waman S. Jawadekar, “Software Engineering Principles and Practice”. Tata McGraw Hill Education Private Limited, New Delhi.

Reference :

1. Roger S. Pressman, “Software Engineering A Practitioner Approach”, McGraw – Hill Higher Education.
2. Timothy C. Lethbridge and Robert Laganriere, “Object – Oriented Software Engineering”, Tata McGraw – Hill Publishing Company Limited, New Delhi.
3. Ian Sommerville, “Software Engineering”, Pearson Education Pte.Ltd.Delhi

MAJOR THEORY

MARKETING MANAGEMENT

Preamble

- To study about the concept of marketing.
- To learn about Buyer's behavior.
- To know about advertising and marketing research.
- Outcome : Buyer's behavior Pricing methods and strategies
Marketing Research.

Unit – I

Definition and meaning of marketing :Modern concept of Marketing – Marketing and selling – Marketing functions – buying transportation – warehousing – standardization – Grading – Packaging.

(12hrs)

Unit – II

Buyer's behavior :Buying motive – Market segmentation – Marketing strategies – product development – introduction of new product – branding – packaging brand loyalty – product life cycle.

(12hrs)

Unit – III

Pricing methods and strategies : Physical Distribution – wholesaler and retailer – Services rendered by them.

(13hrs)

Unit – IV

Promotional methods: Advertising – Publicity – Personal Selling – Sales promotions.

(11 hrs)

Unit – V

Marketing Research : importance in Marketing decisions – Interactive marketing – Use of Internet – Online auction – Recent.

(12hrs)

Text Book :

1. Marketing by Rajan Nair – Sultan Chand Company (or)
2. Marketing Management by Sherleka.

SEMESTER - VI

MAJOR THEORY

DATA COMMUNICATIONS AND NETWORKING

L T P C
4 0 0 4

PREAMBLE

- i) To learn the concepts, terminologies and technologies used in modern days data communication and computer networking.
- ii) To understand the functions of different networking layers.
- iii) To make the students to get familiarized with different protocols and network components.

Outcome : Students are obtained skills in different networking layers, protocols, & components while data communication.

Unit – I:

Data Communication : Standard Organizations – Line Configuration – Topology – Transmission Mode – Categories of Networks – Internet Works – The Model – Functions of the Layers. Transmission of Digital Data : Interfaces and Modems – Digital Data Transmission – DTE – DCE Interface – other Interface Standards.
(12hrs)

Unit – II

Transmission Media: Guided Media – Unguided Media – Multiplexing – Many to one/one to Many, Frequency – Division Multiplexing (FDM), Wave – Division Multiplexing (WDM), Time – Division Multiplexing (TDM).
(12hrs)

Unit – III

Error Detection and Correction : Types of Errors – Detection – Redundancy – Vertical Redundancy Check (VRC) – Longitudinal Redundancy Check (LRC) – Cycle Redundancy Check (CRC) – Checksum – Error Correction. Data Link Control – Line Discipline – Flow Control – Error Control.
(12hrs)

Unit – IV

Switching : Circuit Switching – Packet Switching – Message Switching – Integrated Services – Digital Network (ISDN) – Services – History – Subscribe Access to the ISDN – The ISDN Layers – Broadband ISDN – Future of ISDN.
(12hrs)

Unit – V

Frame Relay : Introduction – Frame Relay Operation – Frame Relay Layers – Congestion Control Leaky Bucket Algorithm – Traffic Control. Networking and Internetworking devices – Repeaters – Gateways – Other Devices – Routing Algorithm, Distance Vector Routing – Link State Routing.
(12hrs)

Text Book :

1. Data Communications and Networking – “Behrouz A Foruzan”, Tata McGraw Hill Publishing Company Limited, New Delhi. 2nd Edition 2006.
2. Data Communications and Networking – Wayne Tomain – Pearson.

Reference Book :

1. Computer Networks – “Andrew S. Tanenbaum”, - Prentice Hall of India, 4th Edition, 2006.
2. Data and Computer Communications “William Stallings Prentice Hall of India 2007

MAJOR ELECTIVE THEORY : ENTERPRISE RESOURCE PLANNING

L T P C

4 0 0 4

Preamble

- To analyze the business process and ERP system.
- To know about accounting ERP.
- To learn about ERP process modeling.
- Outcome : Knowledge in accounting ERP & human resource ERP will be obtained.

Unit – I

Business function and Business process : Functional areas and Business Process – Functional area of operations – Business Process – Marketing Sales – Supply Chain management – Accounting and Finance – Human Resource – Functional areas of Information System – The development of ERP System SAP R/3 – New directions in ERP – Significance and benefits of ERP software and systems.

(!2hrs)

Unit – II

Marketing information system and sales order process in ERP : sales and Distribution in ERP Pre sales activities – sales order processing – inventory sourcing – Delivery – benefits of CRM.

(!2hrs)

Unit – III

Production and supply chain management information system : Production overview – The Production planning process – The SAP ERP Approach to production planning – Sales forecasting – Sales and Operation Planning – Demand Management – Material requirement planning in SAP ERP – ERP and supplier – supply chain.

(!2hrs)

Unit – IV

Accounting in ERP : Accounting Activities – using ERP for accounting Information – Operational decision making problem – Credit management – Industrial credit management in SAP ERP Product profitability analysis – Management reporting with ERP System – Document flow for customer Service.

(12hrs)

Unit – V

Human resource process in ERP : HR with ERP – Advance HR features – Time Management – Payroll – Travel Management – Training and Development – Management by objectives – ERP Process modeling.

(12hrs)

Text Book :

1. Enterprise Resource Planning – Ellen Monk And Bret Wagner – 3rd Edition – MGH.

MAJOR THEORY NET PROGRAMMING

L T P C
5 0 0 4

PREAMBLE

- The objective of this course is to teach the design of web application for the students who already have mastered the fundamentals of the language.
- Students will learn to build and test larger projects using procedures, objects, debugging tools and data files.
- Outcome: Students can develop programme in .Net application, HTML, XML & ADO access.

Unit – I

The .NET Frame Work : Learning the .NET Languages – Introduction to ASP.NET and IIS – Types, Objects and Name Spaces – ASP .NET Application – Building ASP.NET Website.

(15hrs)

Unit – II

Web Form Fundamentals : HTML Controls – Web Controls – Validation Controls – Navigation Controls – Data Controls – Login Controls – CSS – Working with CSS in Web Developer – More Programs.

(15hrs)

Unit - III

State Management : Session – View – Query String – Cookies – Tracing – Logging – Error Handling – User Controls – ASP.NET Ajax – Example Programs.

(14hrs)

Unit – IV

ADO.NET : Over View of ADO.NET – ADO.NET Access – Data Binding – Data List – DATA Grid and Repeaters – Working with Data base – Sample Programs.

(16hrs)

Unit – V

XML : Using XML – XSD – XSLT – Web Services – Creating Web Services – Using Web Services – Caching – ASP.NET Security.

(15hrs)

Text Book :

1. Mathew Mac. Donald, "ASP.NET The complete Reference", Tata McGraw – Hill Publishing Company Ltd., New Delhi.
2. ImarSpanjaars, ASP.NET 3.5 in C# and V.B. : "Wiley India Pvt Ltd.

Reference :

1. O'REILLY, Jesse Liberty, Dan Hurwitz and Brain Mac Donald, "Learning ASP.NET 3.5", II Edition.

MAJOR PRACTICAL

.NET PROGRAMMING – LAB LIST

L T P C
0 0 6 4

1. Arithmetic Operations Using Text Box and Button
2. Adding and Removing Items in runtime using Drop Down List and List Box.
3. Upload and display Image using File Up Load Control.
4. Display Date, Day, Month, Year, Day of Week, Day of the Year using Calendar Control.
5. Create an Advertisement using Ad rotator Control.
6. Create a Registration form and apply ASP.NET validation Controls.
7. Binding data in Grid view using Source.
8. Create small pay roll.
9. Create user control with Source.
10. Create a Login Page using Session Variable.
11. Create Student Mark List using SQL Provider.
12. Grid View, Edit, Update, Cancel and Delete using Source.
13. Create a Crystal Report.
14. Create a Simple Web Page Using CSS.
15. Create a Master Page.

GROUP A (MAJOR ELECTIVE – I)

MAJOR ELECTIVE THEORY – MOBILE COMPUTING

L T P C
4 0 0 4

PREAMBLE

- i) To learn the concepts, terminologies and technologies used in modern days Mobile computing.
- ii) To understand the functions of GSM,RFID, GPRS.
- iii) Outcome: Students will get familiarized with 3G,CDMA & WiMAX.

Unit – I

Introduction Mobility of Bits and Bytes : Wireless The Beginning – Mobile Computing – Dialogue Control – Networks – Middleware and Gateways – Application and Services – Developing Mobile Computer Applications – security in Mobile Computing – Standards – Why is it necessary – Standard bodies. **MOBILE COMPUTING ARCHITECTURE** : History of Computers and Internet – Architecture for mobile computing –Three–tier architecture – Design considerations for mobile computing– Mobile Computing through Internet – Making exiting applications mobile enabled.

(13 hrs)

Unit – II

Mobile Computing through Telephony : Evaluation of telephony – Multiple access procedure – Mobile Computing through telephone – IVR Application – Voice XML – TAPI.

(11hrs)

Unit – III

Emerging Technologies : Blue Tooth – RFID – WiMAX – Mobile IP – Ipv6 – Java Card. **GSM** : Global System for mobile communication – GSM Architecture – GSM Entities – Call routing in GSM – PLMN Interfaces – GSM Addresses and Identifiers – Network Aspects in GSM – GSM Frequency allocations – Authentications and Security – SMS.

(12hrs)

Unit – IV

GPRS : GPRS and packet data network – GPRS network architecture – GPRS network operations – Data Services in GPRS – Application for GPRS – Limitations – Billing and Charging WAP : MMS – GPRS Applications.

(12hrs)

Unit – V

CDMA and 3G : Spread spectrum technology – Is 95 – CDMA vs GSM – Wireless Data – Third Generation networks – Applications on 3G WIRELESS LAN : Wireless LAN Advantages – IEEE 802.11 standards – Architecture – Mobile in Wireless LAN – Deploying wireless LAN – Mobile adhoc networks and sensor networks – Wireless LAN Security – WiFivs 3G.

(12hrs)

Text Books :

1. Mobile Computing, Asoke K Talukder, Roopa R Yavagal, TMH, 2005.

MAJOR ELECTIVE THEORY : INTERNET SECURITY

L T P C
4 0 0 4

PREAMBLE

- i) To learn the basic concepts of computer security.
- ii) To know the different classes of attack in security.
- iii) To make the students to get familiarized with firewalls, proxy servers & cryptography.

Outcome: Knowledge will be obtained in internet security attacks, cryptography concepts.

Unit – I

Introduction : Why require a security? – Picking a Security Policy – Strategies for a Secure Network – The Ethics of Computer Security – Security Threats and levels – Security Plan (RFC 2196).

(12hrs)

Unit – II

Classes of Attack : Stealing Passwords – Social Engineering – Bugs and Backdoors – Authentication Failures – Protocol Failures : Information Leakage – Exponential Attacks – Viruses and Worms – Denial – of – Service Attacks – Botnets – Active Attacks.

(12hrs)

Unit – III

Computer Security : What are Viruse, Trojan Horse, Worms? – How to protect the computer against virus – What is the Structure of Viruse?

(12hrs)

Unit – IV

Firewalls and Proxy Servers : Kinds of Firewalls : Packet Filters – Application – Level Filtering – Circuit – Level Gateways – Dynamic Packet Filters – Distributed Firewalls – What Firewalls Cannot Do – Filtering Services : Reasonable Services to Filter – Digging for Worms – Packet – Filtering – Implementing Polices (Default allow, Default Deny) on Proxy.

(12hrs)

Unit – V

Cryptography : Introduction to Basic Encryption and Decryption, Diffie – Hellman Key Exchange – Concept of Public Key and Private Key – Digital Signatures.

(12hrs)

Text Book :

1. William R. Cheswick, Steven M. Bellovin and Aviel D. Rubin, "Firewalls and Internet Security: Repelling the Wily Hacker", Second Edition, Pearson Education.

Reference :

1. Speed, "Internet Security : A Jumpstart For Systems Administrators And IT Managers", Elsevier India.
2. BehrouzForouzan, "Cryptography And Network Security E/2", Tata McGraw Hill Education.

MAJOR ELECTIVE THEORY

WIRELESS APPLICATION PROTOCOL

L T P C
4 0 0 4

PREAMBLE

- To study about WAP architecture.
- To learn about WAP gateways.
- To know about WML decks.
- Outcome :Students will obtain ideas about WAP application,gateways &WML.

Unit – I

A brief History of WAP : Origins – The WAP Forum – Forum Members – Why WAP? The Great Convergence – WAP Device Characteristics – The Need For WAP - An Overview of WAP : WAP in Action – Web Transaction Model – WAP Transaction Model – WAP Architecture – A closer Look at WAE.

(12hrs)

Unit – II

The WAP Application Environment : The Microbrowser– WML – WML Features – WML Script – WAP Client Software, Hardware, and Websites : OEM Microbrowsers – Consumer Microbrowsers – WAP Devices – Consumer WAP Sites.

(12hrs)

Unit – III

WAP Gateways : A Note on Terminology – WAP Gateway Services – Security – WAP's Security – Some WAP Profiles : exo – net – MainFreight – Sky City Hotels – A consumer Profile – What WAP Does well – Implementation an Enterprise WAP Strategy – The Future of WAP : Problems with WAP – Solving These Problems – The Next Generation.

(12hrs)

Unit – IV

Document Status : References – Definitions and Abbreviations – WML and URLs – WML Character Set – WML Syntax – Core WML Data Types – Events and Navigation – The State Model.

(12hrs)

Unit – V

The Structure of WML Decks :User Agent Semantics – WML Reference Information – A Compact Binary Representation of WML – Static Conformance Statement.

(12hrs)

Text Book :

1. Steve Mann, Scott Sbihli, “The Wireless Application Protocol”, Wiley India Pvt. Ltd., New Delhi.

Reference :

1. Dale Bulbrook, “WAP : A Beginner’s Guide”, Tata McGraw – Hill Publishing Company Limited, New Delhi.
2. SandeepSinghal, Tnomas Bridgman, LalithaSuryanarayana, Daniel Mauney, JariAlvinen, David Bevis, Jim Chan, Stefan Hild, “WAP – The Wireless Application Protocol, Writing Applications for the Mobile Internet”, Pearson Education Pvt. Ltd. Delhi.

GROUP B (MAJOR ELECTIVE – II)
MAJOR ELECTIVE THEORY
HUMAN RESOURCES MANAGEMENT

L T P C
4 0 0 4

Preamble

- To analyze the Human resources management.
- To know about Man power planning.
- To learn about Industrials relation.
- Outcome : Students will familiarized be Resource Management, Man Power Planning & Training of Employees.

Unit – I

Human Resource Management : Definition, Concept, Objectives, Characteristics, Functions – Systems Approach to Personal Management - Organizational Structures.

(12hrs)

Unit – II

Man Power Planning : Job Analysis, Job description, Job Specification, Job Evaluation, Recruitments and Selection Process.

(12hrs)

Unit – III

Training of Employees : Supervisor and Executives – Promotions – Demotions – Transfer, Absenteeism, Turn over Reward and Incentives, Benefits and Employee Services – Performance Appraisal.

(12hrs)

Unit – IV

Industrials Relations : Definition – Significance Causes of Poor Industrial Relations Suggestions to improve Industrial Relations – Labour disputes and Industrial Relations in India.

(12hrs)

Unit – V

Workers Participations in Management : Collective Bargaining and Industrial Relation – Employee Grivance Procedures and Industrial Disciplinary System.

(12hrs)

Text Books:

1. Personal Management : Edwin & Flippo
2. Personal Management : C.B. Mamoria
3. Industrial Relation in India : Charlesmyers
4. Labour Problems in India : Mahindra.

MAJOR ELECTIVE THEORY

FINANCIAL MANAGEMENT

L T P C

4 0 0 4

Preamble

- To analyze Financial Management.
- To know about Sources of Capital.
- To learn about Working Capital Management & Inventory Management.
- Outcome : Knowledge in Inventory Management & Working Capital Management will be acquired.

Unit – I

Nature of Financial Management : Objectives Profit Maximisation Vs Wealth Maximisation – Function – Financial Decision – Organization of the Finance.

(12hrs)

Unit – II

Sources of Capital : Types of Securities, Cost of Capital – Cost of Debt, Cost of Preferred Stock, Cost of Equity, Cost of retained earnings and weighted average cost of capital. Capital Structure theories : Net income, Net Operating income, Modigliani – Miller, Traditional.

(12hrs)

Unit – III

Working Capital Management : Types of Working Capital – Financing Mix : Hedging Conservative – Determinants.

Cash Management : Objectives – Cash Budget Cash Management – Strategies
Receivables Management : Objectives – Credit Policy – Credit Terms, Credit Standards And Collection Policy.

(12hrs)

Unit – IV

Inventory Management : Costs And Benefits of holding Inventory – Classification : ABC Analysis – Order Quantity : EOQ – Order Level : Reorder Point – Minimum Stock, Maximum Stock, Safety Stock.

Capital Budgeting : Importance – Process – Evaluation Methods Payback Period, Accounting Rate of Return, Net Present Value, Profitability Index And Internal Rate of Return.

(12hrs)

Unit – V

Divided Decisions :

Relevance and Irrelevance of Dividend – Walter’s Model, Gordon’s Model, M.M. Model – Determinants of Policy – Alternatives Forms of Dividends : Stock Dividend and Stock Split. Lease Financing : Types – Leasing Decisions.

(12hrs)

Text Books :

1. Financial Management – M.Y.Khan&P.K.Jain (Tata McGraw Hill Publishing Co. Ltd.)
2. Financial Management – L.M.Pandey (Vikas Publishing House (P) Ltd.)
3. Financial Management – James C. Van Horne (Practice Hall India)

MAJOR ELECTIVE THEORY
MAJOR ELECTIVE THEORY : E- COMMERCE

L T P C
4 0 0 4

PREAMBLE

- To impart the fundamental concepts of E-Commerce.
- To study the traditional transactions & E-Payment System.
- To enable the students to develop Cybercash model Of security.
- Outcome:students can develop E-commerce system for different Business as well as cybercash model of security.

Unit – I

Introduction to E-Commerce : Networks – Transactions – Commercial Transactions – Why use E – Commerce – Internet and other Novelties – Advantages of E – Commerce – Electronic Transactions Today - World Wide Web.

(12hrs)

Unit – II

Security Technologies : Why Internet Is Unsecure – Internet Security Holes – Cryptography : Objectives – Codes and Ciphers – Breaking Encryption Schemes – DES Cryptographic Applications – Digital Signature – Nonrepudiation an Message Integrity.

(12hrs)

Unit – III

Traditional Transactions : Updating – Offline and Online Transaction – Secure Web Servers – Required Facilities – Digital Currencies and Payment Schemes – Protocol for the Public Transport – Security Protocols – Credit Card Business Basics.

(12hrs)

Unit – IV

Online Commerce Options : Functions and Features – Payment Systems : Electronic, Digital and Virtual Internet Payment Schemes – Account Setup and Costs – Virtual Transaction Process – InfoHaus – Security Considerations.

(12hrs)

Unit – V

CyperCash : Model – Security – Customer Protection – Client Application – Selling through CyperCash – Servers and Commercial Environments – Payment Methods – Server Market Orientation – Netscape Commerce Server – Microsoft Internet – Servers – Smart Cards.

(12hrs)

Text Books :

1. Pete Loshin, “Electronic Commerce”, 4th edition, An imprint of dlaxmi publications pvt. Ltd., New Delhi 2004.
2. Greestein, “E-Commerce”, Tata Mc – Graww Hill Pvt. Ltd., 2000.
3. E-Commerce Kenneth C.Lauden Carel Guercio Traver-10th Edition- Pearson.

SEMESTER III

SKILL BASED SUBJECT SYLLABUS

L T P C

0 2 4 4

PREAMBLE :

Skilled Based Subjects are Practical oriented. Two hours should be assigned for tutorial class and four hours of practical to do the given practical list.

Sample should be provided to the students for designing the given list.

Outcome : Skills in page maker,photoshop,& Coreldraw are developed.

Subject : DTP

Page Maker

1. Design of ID Card (3" * 2").
2. Design of Visiting Card (3.5" * 2").
3. Design of an attractive invitation Card (5.5" * 8").
4. Design Letter Pad. (7.5" * 9").
5. Preparation of a small booklet with 6 pages (3.5" * 4.5").
6. Design a hand bill (5.5" * 8.5").
7. Create a advertisement for your college.
8. Design your college progress card.
9. Create a receipt bill with counter foil.
10. Create a graph/pie chart.

Photoshop

1. Design of a brochure for an institution.
2. Seasonal Greeting Card.
3. Transporting an image from one background to another.
4. Design a web page poster (1004 * 750)/text book cover page.
5. Crop and image/rotate an image.

CorelDraw

1. Create an object and fill with multiple colours.
2. Design a book cover.
3. Create a frame and enter a paragraph with different formats of text.
4. Export any five image in a single applications.
5. Design page frame by inserting image and objects.

SEMESTER IV SKILLED BASED SUBJECT SYLLABUS

**L T P C
0 2 4 4**

Preamble :

Skilled Based Subjects are Practical oriented. Two hours should be assigned for tutorial class and three hours of practical to do the given practical list.

Sample should be provided to the students for designing the given list.

Outcome : Flash & Dreamweaver skills will be acquired.

Subject : Animation Applications

FLASH

1. Create a Simple Presentation.
2. End a Movie Clip using Script.
3. Start a graphic animation at a specific frame.
4. Text animation using motion tweening.
5. Activate a new window/page using buttons.
6. Bouncing ball with sound effect.
7. Create a scrolling gallery in a page.

DREAMWEAVER

1. Creating a New Dreamweaver Site.
2. Adding Images, Text and Links.
3. Flash Buttons and Flash Text.
4. Creating a Rollover Images.
5. Creating Tables – FAQs.
6. Designing Web Pages with Frames.
7. Inserting and Formatting a Table in Standard View.
8. Design navigation Bar with Images.

SEMESTER V Mini Project

L T P C

0 0 5 4

Students are to take up sample project development activities with the guidelines given below

Preparing a project- brief proposal including

- Problem Identification
- Developing a model for solving the problem
- A statement of system /process specification proposed to be developed (Data Flow Diagram)
- List of possible solution including alternatives and constraints
- Cost benefit analysis
- Time line activities

A report highlighting the design finalization [Based on functional requirements & standards (if any)]

A presentation including the following

- Implementation phase (Hardware/Software/both)
- Testing & Validation of the developed system
- Learning in the project Consolidated report preparation

SEMESTER VI
Major project

L T P C

0 0 7 7

The objective of the project is to enable the students to work in a project of latest topic/research area/industrial applications. Each project student shall have a guide who is a faculty member.

During this semester the students are expected to do literature survey, formulate the problem and form a methodology of arriving at the solution of the problem. Also during this semester, the students are expected to complete the project and submit a full-fledged report comprising of the complete system developed along with implementation and test results.

The departmental committee shall examine the students and the evaluation is based on continuous internal assessment comprising of two reviews.

After two reviews internal is based on seminar, demo and Internal viva-voce will be given by the guide. At the end of the semester, a viva-voce examination will be conducted.

NON – MAJOR ELECTIVE PAPERS – I

Other than B.Sc. (IT), B.Sc. (CIT) & B.Sc. (ISM)

INTRODUCTION TO INFORMATION TECHNOLOGY

L T P C
2 0 0 2

Preamble

- To discuss the basic structure and operation of a digital computer and to discuss in detail the operation of the arithmetic unit including the algorithms.
- To study the memory system including Cache memories and to study different way of communicating with I/O devices and also scripting languages.
- Outcome : Obtain knowledge in Computer storage, I/O media,& Internet

Unit – I

Information Technology Basics : Introduction, Information, Technology, Information Technology, Present Scenario, Role of Information Technology, Information Technology and Internet, Careers in IT industry. **Computer Organization and Architecture** : Central Processing Unit, Inside a Computer, Data representation in Computer, Coding Schemes.

(6hrs)

Unit – II

Computer Memory and Storage Introduction: Memory Hierarchy, Random Access Memory (RAM), Read Only Memory (ROM), RAM, ROM and CPU Interaction, Types of Secondary Storage Devices, Magnetic Tape, Magnetic Disk, Types of Magnetic Disk, Optical Disk, type of optical disks.

(6hrs)

Unit – III

Input Output Media : Introduction, types of input devices, types of output devices. **Multimedia Essentials** : Introduction, **Multimedia** : Definition, Building Blocks of multimedia, multimedia system, multimedia applications, Virtual reality.

(6hrs)

Unit – IV

The Internet : Introduction Evolution of Internet – Basic Internet Terms – Getting Connect to Internet – Internet Applications – Data over Internet. **Internet Tools** : Introduction – Web Browser – Browsing Internet using Internet Explorer – E – Mail – Search Engines – Instant Messaging.

(6hrs)

Unit – V

Emerging Trends in IT : Introduction, E-Commerce – Electronic Data Interchange – Mobile Communication – Bluetooth – Global Positioning System – Infrared Communication – Smart Card – Imminent Technologies.

(6hrs)

Text Books :

1. Introduction to Computers and Information Technology, D. Glory Ratna Mary, S. Selvanayahi, V. Joseph Peter, Shekina Publications.

Reference Books :

1. Introduction to Information Technology ITL Education Solutions Limited, Pearson Education.
2. Fundamentals of Information Technology By Alexis Leon & Mathews Leon Vikas Publication – New Delhi.

NON – MAJOR ELECTIVE PAPERS – II

Other than B.Sc. (IT), B.Sc. (CIT) & B.Sc. (ISM)

BASIC PROGRAMMING DESIGN

L T P C
2 0 0 2

Preamble

- To discuss the basic programming Language and Debugging.
- To study the multidimensional arrays.
- Outcome : Students will acquire knowledge in algorithms,flowchart,& arrays.

Unit – I

Introduction: Algorithms, Flowcharts, Types of Programming Languages, Selection of Programming Languages, Program Writing Debugging.

(6hrs)

Unit – II

Flow Charts: Elementary Concepts – Introduction, Kinds of flow charts, symbols used in flow charts, Advantages of flow charts, examples, constants and variables.

(6hrs)

Unit – III

Flow Charting Simple Computation : Introduction, illustrating examples, conclusions.

(6hrs)

Unit – IV

Subscripted Variables: Introduction, basic concepts of subscripted variables, one dimensional array, illustrating examples, conclusions.

(6hrs)

Unit – V

Multidimensional Arrays: Introductions, definitions, matrix operations, illustrating examples, beyond two dimensions, conclusions – Introduction to File Structure. Introduction, Concept of data files, Types of Data Files, File Organization methods, File Processing activities, Conclusions.

(6hrs)

Text Book :

1. Basic Programming Design, D.S. Arul Selvan & A.A. Regieson Sylum Shalom Publications, Green St, Nagercoil.

Reference :

1. Insight into Flowcharting Raj K. Jain By S. Chand & Company Ltd.