PERIYAR UNIVERSITY
SALEM 638 011

PERIYAR INSTITUTE OF DISTANCE EDUCATIONS
(PRIDE)

MASTER OF COMPUTER APPLICATIONS
(M.C.A)
NON SEMESTER

REGULATIONS AND SYLLABUS
(Effective from the Academic year 2008-2009 and thereafter)
1. OBJECTIVE OF THE COURSE

To transform graduates with sufficient strength in mathematics into software engineers that the industry requires from time to time. The course is designed to impact professional knowledge and practical skills to the students.

2. CONDITION FOR ADMISSION

A candidate who has passed any degree in any discipline of minimum three-year duration with mathematics at +2 level or any degree with at least one paper in mathematics / statistics / business mathematics / business statistics at degree level shall be permitted to appear and qualify for the Master of Computer Applications (M.C.A) degree examination of this University after a course of study of three academic years.

3. DURATION OF THE COURSE

The course for the degree of Master of Computer Applications shall consist of three Academic years.
4. COURSE OF STUDY

The Course of Study shall comprise instruction in the following subjects according to the syllabus and books prescribed from time to time.

PRIDE
MASTER OF COMPUTER APPLICATIONS (M.C.A)

I YEAR
1. Computer Organization and Architecture
2. Data Structures using C
3. Object Oriented programming
4. Microprocessor and Applications
5. Design and analysis of Algorithms
6. Discrete Structures and Automata Theory
7. Computer Oriented Statistical and Numerical Methods
8. Managerial Accounting
9. Practical –I: C Programming Lab
10. Practical –II: C++ & JAVA Programming Lab
11. Practical –III: Multimedia Lab

II YEAR
12. Database Management Systems
13. Visual Programming
14. Operating Systems
15. Software Engineering
17. Computer Networks
18. Computer Based Optimization Techniques
19. Management Concepts and Communication
20. Practical –IV: RDBMS Lab
22. Practical –VI: Graphics Lab
III YEAR

23. Data Mining and Warehousing
24. Internet and Web Programming
25. Distributed Computing and Linux
26. Elective -1
27. Elective -2
28. Practical –VII: Internet and Web Lab
29. Dissertation and Viva Voce

ELECTIVE -1:

- Digital Image Processing
- Compiler Design
- E-Commerce
- Artificial Intelligence and Expert Systems
- Dot Net Technologies

ELECTIVE -2:

2.1 Advanced Java Programming
2.2 Wireless Application Protocol
2.3 Cryptography
2.4 Advanced Networks
2.5 Embedded Systems

5. EXAMINATIONS :

The examination shall be three hours duration to each paper at the end of the each year. The candidate failing in any subject(s) will be permitted to appear for each failed subject(s) in the subsequent examination.

One internal and one external examiner should conduct practical Examinations at the end of each year. At the end of third year viva-voce will be conducted on the basis of the Dissertation submitted by the student. It should be individual work. One internal and one external examiner will conduct the viva-voce jointly.
6. SCHEME OF EXAMINATIONS

The Scheme of Examinations for different years shall be as follows:

<table>
<thead>
<tr>
<th>S. No</th>
<th>Paper Code</th>
<th>Title of the Paper</th>
<th>Duration</th>
<th>Int. Marks</th>
<th>Ext. Marks</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>I YEAR</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td>Computer Organization and Architecture</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>Data Structures Using C</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>Object Oriented programming</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>Microprocessor and Applications</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td>Design and analysis of Algorithms</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>Discrete Structures and Automata Theory</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td>Computer Oriented Statistical and Numerical Methods</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td>Managerial Accounting</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td>Practical –I: C Programming Lab</td>
<td>3</td>
<td>40</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td>Practical –II: C++ &amp; JAVA Programming Lab</td>
<td>3</td>
<td>40</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>11.</td>
<td></td>
<td>Practical – III: Multimedia Lab</td>
<td>3</td>
<td>40</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>II YEAR</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td></td>
<td>Database Management Systems</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>13.</td>
<td></td>
<td>Visual Programming</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>14.</td>
<td></td>
<td>Operating Systems</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>15.</td>
<td></td>
<td>Software Engineering</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>16.</td>
<td></td>
<td>Computer Graphics</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>17.</td>
<td></td>
<td>Computer Networks</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>18.</td>
<td></td>
<td>Computer Based Optimization Techniques</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>19.</td>
<td></td>
<td>Management Concepts and Communication</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>20.</td>
<td></td>
<td>Practical –IV: RDBMS Lab</td>
<td>3</td>
<td>40</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>21.</td>
<td></td>
<td>Practical –V: Visual Basic &amp; VC++ Lab</td>
<td>3</td>
<td>40</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>22.</td>
<td></td>
<td>Practical –VI: Graphics Lab</td>
<td>3</td>
<td>40</td>
<td>60</td>
<td>100</td>
</tr>
</tbody>
</table>
### III YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Theory</th>
<th>Practicals</th>
<th>Lab</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Mining and Warehousing</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Internet and Web Programming</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Distributed Computing and Linux</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Elective -1</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Elective -2</td>
<td>3</td>
<td>25</td>
<td>75</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Practical – VII: Internet and Web Lab</td>
<td>3</td>
<td>40</td>
<td>60</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Project Work and Viva Voce</td>
<td></td>
<td>50</td>
<td>150</td>
<td>200</td>
<td></td>
</tr>
</tbody>
</table>

[Evaluation – 100 Viva Voce – 50]

### TOTAL

3000

---

**ELECTIVE -1:**

1.1. Digital Image Processing
1.2. Compiler Design
1.3. E-Commerce
1.4. Artificial Intelligence and Expert Systems
1.5. Dot Net Technologies

**ELECTIVE -2:**

2.1. Advanced Java Programming
2.2. Wireless Application Protocol
2.3. Cryptography
2.4. Advanced Networks
2.5. Embedded Systems
7. QUESTION PAPER PATTERN

a. For Theory
   Time: 3 Hours                      Max. Marks: 75
   Passing Min :38

   PART – A: 5X5 = 25 Graphics Lab
   (Answer all Questions)
   (Two Questions from each unit with Internal Choice)

   PART – B: 5X10 = 50
   (Answer all Questions)
   (Two Questions from each unit with Internal Choice)

b. For Practical

   Time: 3 Hours                      Max. Marks : 60
   One / Two Compulsory Problem(s) to be solved within 3 hours.

c. Distribution of the marks
   (i) Practical:
       • For Writing procedures/programs in the main answer book 40%
       • For listing and debugging 40%
       • For correct and formatted output 20%
   (ii) Dissertation:
       • Evaluation 100 marks
       • Viva-Voce 50 marks
8. REGULATIONS OF DISSERTATION

a. Students should do their Project work in the Company / Institutions.

b. The Candidate should submit the filled in format as given in Annexure-I to the department for approval during the Ist Week of September in their Project year.

c. Each internal guide shall have maximum of eight Students.

d. Periodically the project should be reviewed minimum three times by the internal guide.

e. The Students should prepare three copies of the dissertation and submit the same to the PRIDE Center on 30th April for the evaluation by examiners. After evaluation one copy is to be retained in the PRIDE Center library and one copy is to be submitted to the University (PRIDE Director) and the student can hold one copy.

f. A Sample format of the dissertation is enclosed in Annexure-II.

g. Format for the Title page and certificate are enclosed in Annexure III.

h. The Students should use OHP / Power Point Presentation during their Viva-Voce Examinations.

9. PASSING MINIMUM

Sessional marks will be awarded to the candidates for both theory and practical. It will be based on the attendance and assignments/lab reports for theory/practical. During the final year the students are asked to present the progress of their project at least thrice to the internal guide, based on which sessional mark is awarded.

The candidate shall be declared to have passed the examinations in a subject , if the candidate secures not less than 50% of the total prescribed marks for the subject in Sessional and University Examinations put together, subject to the candidate getting a minimum of 50% of the marks in the University examination .
10. CLASSIFICATION OF SUCCESSFUL CANDIDATES

Candidates who secure not less than 60% of the aggregate marks in the whole examination shall be declared to have passed the examination in First Class. All other successful candidates shall be declared to have passed in Second Class. Candidates who obtain 75% of the marks in the aggregate shall be deemed to have passed the examination in First Class with Distinction provided they pass all the examinations prescribed for the course at the first appearance.

11. MAXIMUM DURATION FOR THE COMPLETION OF THE PG PROGRAMME

The maximum duration for completion of the PG Programme shall not exceed five academic years from the year of admission.

12. COMMENCEMENT OF THIS REGULATION:

These regulations shall take effect from the academic year 2007-08, i.e., for students who are admitted to the first year of the course during the academic year 2007-08 and thereafter.
ANNEXURE - I
PERIYAR UNIVERSITY

Name of the PRIDE Center : 
Course : 
Student Name : 
Register Number : 
Title of the Dissertation : 
Address of Organization / Institution : 
Name of the External Guide : 
Designation : 
Place : 
Date : 
Signature of External Guide (with seal)

Name of the Internal Guide : 
Qualification : 
Teaching Experience : 
Place : 
Date : 
Signature of Internal Guide

Coordinator

[Approved or not Approved]
[ University Use]
ANNEXURE II

BONAFIDE CERTIFICATE
COMPANY ATTENDANCE CERTIFICATE
ACKNOWLEDGEMENT

CONTENTS

<table>
<thead>
<tr>
<th>Chapter No</th>
<th>Title</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SYNOPSIS</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>INTRODUCTION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ORGANIZATION PROFILE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SYSTEM CONFIGURATION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HARDWARE CONFIGURATION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SOFTWARE CONFIGURATION</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>SYSTEM STUDY</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EXISTING SYSTEM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DEMERITS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PROPOSED SYSTEM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SYSTEM STUDY</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FEATURES</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>SYSTEM DESIGN AND DEVELOPMENT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INPUT DESIGN / FORM DESIGN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OUTPUT DESIGN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CODE DESIGN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DATABASE DESIGN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SYSTEM DEVELOPMENT</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>TESTING AND IMPLEMENTATION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CONCLUSION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BIBLIOGRAPHY</td>
<td></td>
</tr>
</tbody>
</table>

APPENDICES

A. DATA FLOW DIAGRAM
B. TABLE STRUCTURE
C. SAMPLE INPUT / FORMS
D. SAMPLE OUTPUT / REPORT

Note: Based on the Dissertation on Work The Above Titles May Be Varied
ANNEXURE III

A. Format of the title page

TITLE OF THE DISSERTATION

A Dissertation submitted in partial fulfillment of
the requirements for the degree of

Master of Computer Applications

to the

Periyar University, Salem – 11

By

STUDENT NAME

REG. NO.

NAME OF THE CENTRE

(AFFILIATED TO PERIYAR UNIVERSITY)

PLACE with Pin Code

MONTH – YEAR
B. Format of the Certificate

Name of the Internal Guide
Designation
Department Name
College Address

CERTIFICATE

This is to certify that the dissertation entitled ______________________ submitted in partial fulfillment of the requirement for the degree of Master of Computer Applications to the PRIDE, Periyar University, Salem is a record of bonafide work carried out by ______________________ under supervision and guidance and that no part of the dissertation has been submitted for the award of any degree or diploma.

Date :
Place:  Signature of the Guide

______________________________
Signature of the Coordinator

Submitted for the Viva-Voce Examination held on ________________

Internal Examiner  External Examiner
1. COMPUTER ORGANIZATION AND ARCHITECTURE

UNIT I

Number system Binary, Decimal, Octal, and Hexadecimal – Conversion from one to another – Complements – Binary Codes. Basic logic Gates – Basic Theorems and Properties of Boolean Algebra – NAND, NOR implementation – Sum of Products – Product of Sums – Karnaugh Map – Tabulation – Don’t Care Conditions.

UNIT II


UNIT III


UNIT IV


UNIT V

Input – Output Organization: Peripheral Devices – Input - Output Interface – Asynchronous Data Transfer (Strobe & Handshaking Method) – Modes of Transfer –
Priority Interrupt – DMA – IOP. Memory Organization: Memory Hierarchy – Main Memory – Auxiliary Memory – Associative Memory – Cache Memory – Virtual Memory.

TEXT BOOKS:


REFERENCE BOOKS:

2. DATA STRUCTURES USING C

UNIT I


UNIT II


UNIT III

UNIT IV


UNIT V


TEXT BOOKS:

REFERENCE BOOKS:
3. OBJECT ORIENTED PROGRAMMING

UNIT I
Basic Concepts of OOP – Structure of C++ - Data types - Variables – Control Structures – Functions – Classes and Objects – Constructors and Destructors.

UNIT II

UNIT III

UNIT IV
Introduction to Java – Features of Java – Methods and Classes – Array, Strings and Vector – Inheritance – Packages and Interfaces.

UNIT V

REFERENCE BOOKS:
4. MICROPROCESSOR AND APPLICATIONS

UNIT-I

UNIT – II

UNIT – III

UNIT – IV
UNIT - V


TEXT BOOKS


REFERENCE BOOKS:

3. N.K.Srinath, “8085 Microprocessor Programming and Interfacing”, PHI.
5. DESIGN AND ANALYSIS OF ALGORITHMS

UNIT I

UNIT II
Greedy Methods: Knapsack Problem, Minimum Cost Spanning Trees, Optimal Storage on Tapes and Single Source - Shortest Path Problem.

UNIT III
Dynamic Programming: Multistage Graphs, 0/1 knapsack and Traveling Salesman Problem. Basic Traversal and Search Techniques: Techniques for Binary Tree, Techniques for Graphs: Depth First Search and Breadth First Search - Connected Components and Spanning Tree - Biconnected Components and DFS.

UNIT IV
Backtracking: 8 Queens Problems, Sum of Subsets, Graph Colouring, Hamiltonian Cycle and Knapsack Problem.

UNIT V
Branch and Bound: 0/1 Knapsack Problem, Travelling Salesman Problem. Least Cost Search, 15 Puzzle Problem, FIFO Branch and Bound and LC Branch and Bound.
TEXT BOOK:

REFERENCE BOOKS:
6. DISCRETE STRUCTURES AND AUTOMATA THEORY

Note: No Theorems required. Emphasis on Concepts and Applications.

UNIT I

UNIT II

UNIT III

UNIT IV

UNIT V

TEXT BOOKS:

REFERENCE BOOKS:
7. COMPUTER ORIENTED STATISTICAL AND NUMERICAL METHODS

Note: No derivations required. Emphasis on Concepts and applications.

UNIT I

UNIT II

UNIT III
Numerical Methods: Introduction - Errors - Machine computation - Transcendental and polynomial equation - Initial approximation - bisection, secant, Newton - Raphson, the muller, the chebyshev and multipoint iterative methods - polynomial equation - The Birge-vieta, Bairstow and Graeffe’s root squaring methods.

UNIT IV
UNIT V


TEXT BOOKS:


REFERENCE BOOKS:

8. MANAGERIAL ACCOUNTING

UNIT I


UNIT II


UNIT III


UNIT IV

Rate of Budget and Budgetary Control: Meaning – Advantages and limitations - Classification of Budgets - Preparation of Production - Sales - Cash and Flexible Budgets. Capital Budget: Meaning and Importance - Methods of Ranking Investment Proposals - Pay-Back - Average of Return and Discounted Cash Flow Methods.
UNIT V

TEXT BOOKS:
2. Dr.S.N.Maheswari, “Principles of Management Accounting”, Sultan Chand & sons, 2005. (Unit II to Unit V)

REFERENCE BOOKS:
9. PRACTICAL – I
C PROGRAMMING LAB

1. Control Structures.
2. Arrays.
5. Recursion.
7. Pointers and
   - Arrays.
   - Strings.
   - Structures.
10. PRACTICAL – II
C++ & JAVA PROGRAMMING LAB

C++:
1. Matrix Manipulation.
2. Implementation of stack using Arrays.
5. Write a program to convert infix to postfix expressions using arrays.
6. Write a program to add two polynomials using pointers.
7. Implementation of Insertion Sort and Heap Sort.

JAVA:
Write a JAVA program to implement the following:
1. Classes and objects.
2. Arrays.
3. Inheritance.
4. Packages and Interfaces.
5. Exception Handling.
6. Threads.
7. Simple applet programs.
11. PRACTICAL III
MULTIMEDIA LAB

SOFTWARE: FLASH
1. Simple animation.
2. Tweened animation.
3. Creating movies.

SOFTWARE: MACROMEDIA – DIRECTOR
1. Text handling [Size changing, Animation etc.]
2. Play school teaching aid [Like alphabet teaching with pictures]
3. Company annual report presentation [should include any type of graph
denoting the sales of the company and the other important features]
4. Advertisement for Products, Film, Institutions, Automobile Products etc.,
   [Include appropriate pictures, text and Animation]
5. Animation of 3D object with sound.

SOFTWARE: FREEHAND
1. Designing the gate, grill, windows etc.,
2. Text handling [Moving, Duplicating, Scaling, Rotating, Changing the
   alignment and Orientation]
3. Greetings card design [Like scenery, group of birds, bunch of flowers, etc.]

SOFTWARE: ADOBE – PHOTOSHOP
1. Editing the Images.
2. Design a Greeting Card, Invitation etc.,

NOTE:
The experiments listed are only samples. The concern centre can design or
modify the samples.
12. DATABASE MANAGEMENT SYSTEMS

UNIT I


UNIT II


UNIT III


UNIT IV


UNIT V


TEXT BOOKS:


REFERENCE BOOKS:

13. VISUAL PROGRAMMING

UNIT – I

UNIT – II

UNIT – III
Dialog Boxes, Controls, Common controls – Common Dialogs, Active x, Data base Applications.

UNIT – IV

UNIT – V
REFERENCE BOOKS:

14. OPERATING SYSTEMS

UNIT I

UNIT II

UNIT III

UNIT IV

UNIT V

TEXT BOOKS:

REFERENCE BOOKS:

15. SOFTWARE ENGINEERING

UNIT – I

UNIT – II

UNIT – III

UNIT – IV

UNIT – V


TEXT BOOK:


REFERENCE BOOKS:

UNIT I

UNIT II

UNIT III

UNIT IV
UNIT V


TEXT BOOK:


REFERENCE BOOK:

UNIT I

UNIT II

UNIT III

UNIT IV
UNIT V

TEXT BOOK:

REFERENCE BOOKS:
18. COMPUTER BASED OPTIMIZATION TECHNIQUES

Note: Only the conceptual understanding of the topics in this paper together with simple application is envisaged.

UNIT - I

UNIT – II

UNIT – III

UNIT – IV
Sequencing problem- Processing n jobs through two machines and three machines processing n jobs through M machines – processing 2 jobs through M machines – project scheduling by PERT/CPM – Difference between PERT and CPM – Constructing the network- critical path analysis – Float of an Activity – Three time Estimated for PERT _ Project cost by CPM.

UNIT – V

TEXT BOOK:

REFERENCE BOOKS
UNIT I


UNIT II


UNIT III


UNIT IV


UNIT V

REFERENCE BOOKS:
3. Tripathy and Reddy, “Principles of Management”, TMH.

20. PRACTICAL –IV
RDBMS LAB

1. Creation of tables - executing All Queries.

PACKAGES IN D2K.
2. Library Management systems.
3. Payroll.
4. Tourist Information System.
5. Banking System.

Note: Use Triggers, Procedures, Menus and Reports.

21. PRACTICAL –V
VISUAL BASIC & VC++ LAB

VISUAL BASIC:

Note:
*Each Package should contain atleast 3 Forms and 2 Reports.
*Include appropriate validations wherever necessary.
*Validate with at least 5 records.
*Prepare summarized and Query based Report.

1. Student Information System.
2. Stock Management System.
3. Reservation System for any one of the following
   (i).Bus,(ii)Airline,(iii)Railways.
4. Employee Information System.
5. Hospital Management System.
VC++:

1. Console Application.
2. Case Conversion using Edit Control.
3. Programs using Common Dialog Controls and Dialog Boxes.
4. Creating Simple Active X Control.
5. Simple Database Application using Data Control.

24. PRACTICAL – VI

GRAPHICS LAB

GRAPHICS USING C:

1. Drawing a line, circle and ellipse using Bresenham’s Algorithm.
2. 2D Transformations.
3. Windowing and Clipping.
4. 3D Transformations.
5. Simple Animation. (Bouncing ball, Blinking eyes etc.,)
6. Histogram and Bar Chart.
7. Free hand drawing.
8. Displaying text in different fonts.
UNIT I
Introduction to Data Mining – Knowledge Discovery in Databases - Data Mining Issues - Data Mining from a Database perspective - Data Mining Tasks - Applications - Data Processing - Data Cleaning - Data Integration and Transformation - Data Reduction - A Statistical Perspective on Data Mining - Similarity Measures.

UNIT II
Classification: Introduction - Statistical Based Algorithm - Distance based Algorithm - Decision Tree Based Algorithm - ID3 - NN based Algorithm - Propagation - Rule Based Algorithm - Generating Rules for DT - Combining Techniques.

UNIT III
Clustering - Introduction - Similarity and Distance Measures - Outlines - Hierarchical Agglomerative - Divisive Clustering - Partitional - K-means Clustering Large db - BIRCH - Clustering with Categorical Attributes - Rock.

UNIT IV

UNIT V
Data Warehousing: Introduction - What is a Data Warehouse - Definition - Multidimensional Data Model - OLAP Operations - Warehouse Schema - Data

**TEXT BOOKS:**

1. Jiawei Han and Micheline Kamber, “Data Mining Concepts and Techniques”, Harcourt India Pvt Ltd., New Delhi, 2001. (Unit I)

**REFERENCE BOOKS:**

24. INTERNET AND WEB PROGRAMMING

UNIT I

UNIT II

UNIT III

UNIT IV

UNIT V


TEXT BOOK:


REFERENCE BOOKS:

25. DISTRIBUTED COMPUTING AND LINUX

UNIT I


UNIT II


UNIT III


UNIT IV


UNIT V


TEXT BOOKS:

REFERENCE BOOKS:

26. ELECTIVE – 1

27. ELECTIVE - 2
Simple Web Page and website design for a department, college, company etc.,

1. Using HTML
2. Using Java Script
3. Using DHTML
4. Using ASP
5. Using Perl and XML

ELECTIVE - 1

E1.1. DIGITAL IMAGE PROCESSING

UNIT – I


UNIT-II


UNIT–III

UNIT –IV


UNIT – V


TEXT BOOK:


REFERENCE BOOKS:

ELECTIVE - 1
E1.2. COMPILER DESIGN

UNIT I

UNIT II

UNIT III

UNIT IV
UNIT V


TEXT BOOK:


REFERENCE BOOKS :


ELECTIVE - 1

E1.3. E – COMMERCE

UNIT I


UNIT II


UNIT III

UNIT IV

UNIT V

TEXT BOOK:
REFERENCE BOOKS:

3. Charles Trepper, “Microsoft E-Commerce Strategies”, PHI.
ELECTIVE - 1

E1.4 ARTIFICIAL INTELLIGENCE
AND EXPERT SYSTEMS

UNIT I


UNIT II


UNIT III


UNIT IV


UNIT V

TEXT BOOKS

REFERENCE BOOKS
2. P.H. Winston, “Artificial Intelligence”, Pearson Education
ELECTIVE - 1
E1.5. DOT NET TECHNOLOGIES

UNIT I
Introduction to .NET: Vision and goals of .NET, Overview of .NET applications, XML and .NET, Highlights of .NET framework, .NET Evolution, .NET framework architecture-CTS, metadata CLS, CLR, .NET class framework, Memory management in CLR.

UNIT II
C# Programming: Creation of C#, Overview of C#, Data types, Literals and variables Operators, Program control statements.

UNIT III
Introducing Classes, Objects and Methods, Arrays and Strings, Operator Overloading.

UNIT IV
Indexes and properties, Inheritance, Interfaces, Structures, Enumerations, Exceptional Handling.

UNIT V
REFERENCE BOOKS:


ELECTIVE - 2

E2.1. ADVANCED JAVA PROGRAMMING

UNIT – I

UNIT – II

UNIT – III

UNIT – IV

UNIT – V

REFERENCE BOOKS:
ELECTIVE - 2

E2.2. WIRELESS APPLICATION PROTOCOL

UNIT –I

UNIT – II

UNIT – III

UNIT – IV
UNIT - V


TEXT BOOK:

REFERENCE BOOK:
ELECTIVE - 2

E2.3. CRYPTOGRAPHY

UNIT I


UNIT II


UNIT III


UNIT IV

UNIT V


TEXT BOOK :


REFERENCE BOOKS :


ELECTIVE - 2

E2.4. ADVANCED NETWORKS

UNIT I

UNIT II

UNIT III

UNIT IV
UNIT V


TEXT BOOKS:


REFERENCE BOOKS:

ELECTIVE - 2

E2.5. EMBEDDED SYSTEMS

UNIT I


UNIT II


UNIT III


UNIT IV


UNIT – V


TEXT BOOK:


REFERENCE BOOKS:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name and Designation</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>R.BALASUBRAMANIAM Senior Lecturer in CS</td>
<td>Manomaniain Sundaranar University, Tirunelveli</td>
</tr>
<tr>
<td>2.</td>
<td>CHANDRASEKARAN, Senior Lecturer in CS</td>
<td>Annamalai University, Annamalai Nagar</td>
</tr>
<tr>
<td>3.</td>
<td>M.THANGARAJ Senior Lecturer in CS</td>
<td>Madurai Kamaraj University, Madurai - 21</td>
</tr>
<tr>
<td>4.</td>
<td>T.CHAKRAVARTHY SG Lecturer in CS</td>
<td>AVVM Sri Pushpam College, Poondi, Thanjavur</td>
</tr>
<tr>
<td>5.</td>
<td>S.KUMARAVEL SS Lecturer in CS</td>
<td>AVVM Sri Pushpam College, Poondi, Thanjavur</td>
</tr>
<tr>
<td>6.</td>
<td>P.R.SIVAKUMAR SS Lecturer in CS</td>
<td>AVVM Sri Pushpam College, Poondi, Thanjavur</td>
</tr>
<tr>
<td>7.</td>
<td>D.S.RAVI Lecturer &amp; Head, Dept of CS</td>
<td>ST.Joseph College, Tiruchy</td>
</tr>
<tr>
<td>8.</td>
<td>V.SRI VIDHYA Lecturer in CS</td>
<td>ST.Joseph College, Tiruchy</td>
</tr>
<tr>
<td>9.</td>
<td>R.BHUVA NESWARI Lecturer in CS</td>
<td>ST.Joseph College, Tiruchy</td>
</tr>
<tr>
<td>10.</td>
<td>ANTO SANJAY Lecturer in CS</td>
<td>ST.Joseph College, Tiruchy</td>
</tr>
<tr>
<td>11.</td>
<td>CHARLES Lecturer in CS</td>
<td>ST.Joseph College, Tiruchy</td>
</tr>
<tr>
<td>12.</td>
<td>R.PALANIPPAN SG Lecturer in CS</td>
<td>VHNSN College, VirudhuNagar, 626 001</td>
</tr>
<tr>
<td>13.</td>
<td>PERIASWAMY Lecturer in CS</td>
<td>Nehru Memorial College, Puthanampatti Post, Tirchy</td>
</tr>
<tr>
<td>14.</td>
<td>MURUGANANDAM Lecturer in CS</td>
<td>TVK arts College, Thanjavur</td>
</tr>
<tr>
<td>15.</td>
<td>B.VENKATACHALAM Lecturer in CS</td>
<td>TVK arts College, Thanjavur</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Designation</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>16.</td>
<td>MADHIVANAN</td>
<td>Lecturer &amp; Head, Dept of CS</td>
</tr>
<tr>
<td>17.</td>
<td>C.JOTHI VENKATESWARAN</td>
<td>Lecturer in CS</td>
</tr>
<tr>
<td>18.</td>
<td>P.CHELLADURAI</td>
<td>Lecturer &amp; Head, Dept of CS</td>
</tr>
<tr>
<td>19.</td>
<td>VELMURUGAN</td>
<td>Lecturer in CS</td>
</tr>
<tr>
<td>20.</td>
<td>JAYARAJ</td>
<td>Senior Lecturer in CS</td>
</tr>
<tr>
<td>21.</td>
<td>N.VEERAPANDIAN</td>
<td>Lecturer in CS</td>
</tr>
<tr>
<td>22.</td>
<td>J.CHOCKALINGAM</td>
<td>Lecturer in CS</td>
</tr>
<tr>
<td>23.</td>
<td>L.RAVI</td>
<td>Lecturer in CS</td>
</tr>
<tr>
<td>24.</td>
<td>V.VENKATESH BABU</td>
<td>Lecturer in CS</td>
</tr>
<tr>
<td>25.</td>
<td>B.MURALI</td>
<td>Lecturer &amp; Head, Dept of CS</td>
</tr>
<tr>
<td>26.</td>
<td>R.RAVICHANDRAN</td>
<td>SG Lecturer in CS</td>
</tr>
<tr>
<td>27.</td>
<td>VENKATESH KUMAR</td>
<td>SG Lecturer in CS</td>
</tr>
<tr>
<td>28.</td>
<td>O.A.MOHAMED JAFER,</td>
<td>SG Lecturer in CS</td>
</tr>
<tr>
<td>29.</td>
<td>P.H.MAIDEEN SHAHULHAMEED</td>
<td>SG Lecturer in CS</td>
</tr>
<tr>
<td>30.</td>
<td>RAVI</td>
<td>Lecturer &amp; Head, Dept of CS</td>
</tr>
<tr>
<td>31.</td>
<td>R. THIYAGARAJAN</td>
<td>Lecturer &amp; Head, Dept of CS</td>
</tr>
<tr>
<td>32.</td>
<td>V.SENTHIL</td>
<td>Lecturer &amp; Head, Dept of CS</td>
</tr>
<tr>
<td>33.</td>
<td>L.JOSEPHINE MARY,</td>
<td>Lecturer in CS</td>
</tr>
<tr>
<td>34.</td>
<td>HEMAVATHY,</td>
<td>Lecturer in CS</td>
</tr>
<tr>
<td>35.</td>
<td>V.N.RAJARAMAN</td>
<td>Lecturer in CS</td>
</tr>
<tr>
<td>36.</td>
<td>M.S.JOSEPHINE</td>
<td>Dr.M.G.R Deemed University, Chennai.</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Designation</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>37</td>
<td>D.PUGAZHENTHI</td>
<td>Senior Lecturer in CS</td>
</tr>
<tr>
<td>38</td>
<td>S.JAYASREE</td>
<td>Lecturer in CS</td>
</tr>
<tr>
<td>39</td>
<td>V.MEENAKSHI</td>
<td>Lecturer in CS</td>
</tr>
<tr>
<td>40</td>
<td>KARTHIKEYAN,T</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>41</td>
<td>S.K.JAYANTHI</td>
<td>(S.G) Lecturer &amp; Head,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dept. of Computer Science</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>E.S.SAMUNDEESWARI</td>
<td>(S.G) Lecturer in CS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>J.SUGUNA</td>
<td>(S.G) Lecturer in CS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>S.SATHAPPAN</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>45</td>
<td>C. SENTHIL KUMAR</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>46</td>
<td>M.PARAMESWARI</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>47</td>
<td>S.AROKIASAMY</td>
<td>S.G. Lecturer in CS</td>
</tr>
<tr>
<td>48</td>
<td>A.KUMAR</td>
<td>S.G. Lecturer in CS</td>
</tr>
<tr>
<td>49</td>
<td>B.SRINIVASAN</td>
<td>S.G. Lecturer in CS</td>
</tr>
<tr>
<td>50</td>
<td>T.RENGANAYAGI</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>51</td>
<td>M.BHUVADESWARI</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>52</td>
<td>B.GUNALAN</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>53</td>
<td>C.K.VENKATESAN</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Designation</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>54</td>
<td>R.SANKARASUBRAMANIAN</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>55</td>
<td>T.SANTHA</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>56</td>
<td>D.SATHYASRINIVAS</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>57</td>
<td>A.BALASUBRAMANIAN</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>58</td>
<td>K.S. JAMUNA</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>59</td>
<td>R.KUMAR</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>60</td>
<td>G.P.Ramesh Kumar</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>61</td>
<td>T.K. KARTHEESWARI</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>62</td>
<td>E.RAMADEVI</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>63</td>
<td>B.MANOHRAN</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>64</td>
<td>M.S.VIJAYA</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>65</td>
<td>E.CHANDRA</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>66</td>
<td>P.RADHA</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>67</td>
<td>C.THANGAMANI</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>68</td>
<td>M.PUNITHAVALLI</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>69</td>
<td>P.NAVANEETHAM</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>70</td>
<td>B.VALLIMAYEIL</td>
<td>S.G Lecturer in CS</td>
</tr>
<tr>
<td>71</td>
<td>P.SENTHIL KUMAR</td>
<td>S.G Lecturer in CS</td>
</tr>
</tbody>
</table>