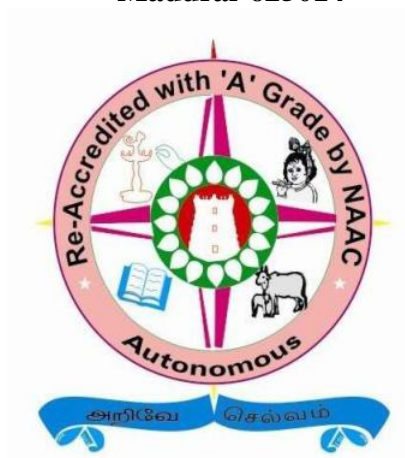


YADAVA COLLEGE

**(Autonomous, Co- Educational Institution)
Affiliated to Madurai Kamaraj University
Re - Accredited with “A” Grade by NAAC
Govindarajan Campus, Thiruppalai,
Madurai-625014**



DEPARTMENT OF COMPUTER APPLICATION

(SELF – FINANCE COURS)

C.B.C.S. - SYLLABUS

w.e.f. 2015-2016

DEPARTMENT OF COMPUTER APPLICATIONS
YADAVA COLLEGE (AUTONOMOUS)
CHOICE BASED CREDIT SYSTEM SYLLABUS PLAN (2015-2016)
UNDERGRADUATE PROGRAMME

B.C.A. (Bachelor of Computer Applications)

Semester	Part Code	Subject Code	Title of the Paper	Teaching	
				Hours	Credits
I	I		Tamil	5	3
	II		English	5	3
	Core		PC-Software	6	5
	Allied		Statistics	4	2
	Core Lab I		PC-Software – LAB	3	3
	Core Lab II		Desktop Publishing– LAB	3	3
	IV ENS		Environmental Studies	2	2
	V SBE		Skill Based Elective	2	2
II	I		Tamil	5	3
	II		English	5	3
	Core		Programming in C	6	6
	Allied		Discrete Mathematics	4	2
	CoreLab III		Programming in C– LAB	3	3
	CoreLab IV		Web Designing– LAB	3	3
	IV VAE		Value education	2	2
	V SBE		Skill Based Elective	2	2

III	Core		Database Management System	4	3
			Object oriented Programming in C++	4	3
			Computer Graphics	4	3
			Accounting Software	4	3
	Allied		Operational Research	4	2
	Core Lab V		Programming in C++ – LAB	2	2
	Core Lab VI		Accounting Software – LAB	2	2
	Core Lab VII		Database Management System - LAB	2	2
	IV TAB		NME: Fundamentals of Computers	2	2
	V SBE		Skill based elective	2	2
	Self-study		Web Designing	--	3
IV	Core		Visual Basic Programming	5	3
			Java Programming	4	3
			Data Structures	4	3
	Allied paper		Numerical methods using C	4	2
	Core Lab VIII		Visual Basic Programming– LAB	2	2
	Core Lab IX		Scripting - LAB	2	2
	Core Lab X		Java Programming - LAB	2	2
	Elective I		1.Digital Principles and Computer Architecture 2. System Software	3	2
	IV TAB		NME: Desktop Publishing	2	2
	V SBE		Skill based elective	2	2
	Self-study		Scripting Language	--	3

V	Core		Software Engineering	4	3
			Operating system	4	3
			Computer Networks	5	3
			ASP.Net	5	3
	Core Lab XI		Advanced Java - LAB	2	2
	Core Lab XII		ASP.Net - LAB	2	2
	Core Lab XIII		Multimedia - LAB	2	2
	Elective II		1.Multimedia 2.Client Server Computing	4	2
	V SBE		Skill based elective	2	2
	Self-study		Enterprise Resource Planning	--	3
VI	Core		Vb.Net Programming	5	3
			PHP	5	3
	Core Lab XIV		PHP – LAB	3	3
	Core Lab XV		VB.Net - LAB	3	3
	Elective III		1.Software Testing 2.E Commerce	5	2
	Research		Project	7	7
	IV SBE		Skill based Elective	2	2
	V		PE/NCC/NSS/EXT	--	1
	Self-study		Mobile Computing	--	3
	TOTAL			180	152

BLUE PRINT OF THE QUESTION PAPER

Section	Type of Questions	No. of Questions	No. of Questions to be answered	Marks of each Questions	Total
A	Short answer Questions (Open choice)	15	10	2	20
B	Paragraph type Questions (Open choice)	8	5	5	25
C	Essay type Questions(Either Or Choice)	5	3	10	30
Total					75

EVALUATION TECHNIQUES

Title	Evaluation		Exam Duration	Total
	Internal	External		
Theory	25	75	3	100
Practical	40	60	3	100
Project	20	80	-	100

DEPARTMENT OF COMPUTER APPLICATION
YADAVA COLLEGE (AUTONOMOUS)
CHOICE BASED CREDIT SYSTEM SYLLABUS PLAN (2015-2016)
UNDERGRADUATE PROGRAMME

Nature of subject		Title	Hours	Credit
Part I		Tamil	10	6
Part II		English	10	6
Part III Core theory	1	PC-Software	6	5
	2	Programming in C	6	6
	3	Database Management System	4	3
	4	Object Oriented Programming in C++	4	3
	5	Computer Graphics	4	3
	6	Accounting Software	4	3
	7	Visual Basic Programming	5	3
	8	Java Programming	4	3
	9	Data Structures	4	3
	10	Software Engineering	4	3
	11	Operating System	4	3
	12	Computer Networks	5	3
	13	ASP.Net	5	3
	14	Vb.Net Programming	5	3
	15	PHP	5	3

Core practical	1	PC-Software	3	3
	2	Desktop Publishing	3	3
	3	Programming in C	3	3
	4	Web Designing	3	3
	5	Programming in C++	2	2
	6	Accounting Software	2	2
	7	Data Base Management System	2	2
	8	Visual Basic Programming	2	2
	9	Java Programming	2	2
	10	Scripting	2	2
	11	ASP.Net	2	2
	12	Advanced Java	2	2
	13	Multimedia	2	2
	14	VB.Net	3	3
	15	PHP	3	3
Allied	1	Statistics	4	2
	2	Discrete mathematics	4	2
	3	Operational research	4	2
	4	Numerical methods using C	4	2
Elective	I	1.Digital Principles and Computer Architecture 2.System Software	3	2
	II	1.Multimedia 2.Client Server Computing	4	2

Research	III	1. Software Testing 2. E Commerce	5	2
		Project viva – voce	7	7
Part IV	1	ENS	2	2
	2	VAE	2	2
	3	TAB/TAA/NME	4	4
	4	SBE	12	12
	5	PE/NCC/NSS/EXT	--	1
	6	Self Study	--	12
TOTAL			180	152

PC - SOFTWARE

Semester: I

Subject Code:

Hours/Week: 6

Credit: 5

UNIT - I

Introduction –Introduction to Computers-Evolution-Generation of Computers-Computer Hierarchy-Applications of Computer-Introduction to Internet-Web Features-Windows Basics-Introduction to word-Editing a document-Move and Copy text-Formatting text & Paragraph-Enhancing document-Columns, tables and other features.

UNIT - II

Introduction to work sheet and shell-getting started with Excel-Editing cell & using commands and functions-Moving & Copying, Inserting & Deleting rows & Columns-Printing Worksheet- Creating Charts –Naming ranges using statistical, math and financial functions.

UNIT - III

Database in a worksheet-Additional formatting commands and drawing toolbar-other commands & functions-multiple worksheet and macros- Overview of PowerPoint-presenting shows for corporate and commercial using PowerPoint-Overview of Ms-Access- Introduction to DTP-Hardware requirement-Software Requirement-DTP Operator's Arsenal.

UNIT - IV

Introduction to CorelDraw-Opening an existing Drawing-The Dialog Box Open Drawing-Cartesian Coordinates-The property bar-Creating a text file-Basic terms-The Toolbox-Page and Pasteboard-Standard toolbar-Handling Shapes using property Bar-Rotating Objects-Lines and Arrows-Page and Document Setup-Rulers gridlines and Grid-Using Docker Windows-Using Text.

UNIT- V

Introduction to Photoshop-Opening and Saving and Closing an Image-Creating New Image-Using Tool Box-Tool Options Bar-Using Layers-Paths for saving selection-Fascinating Colors-Inserting Text in Images-Filter to improve Images-Introduction to PageMaker-Creating a new Publication-Handling pages-Using the toolbox-Importing Text & Pictures-Wrapping Text Around Pictures-Opening Multiple Publication windows-Using Story Editor-Spelling, Find and Change-View, Page and Pasteboard-Grouping and Arranging-Using Styles.

TEXT BOOKS:

1. PC Software for Windows 98' made simple, R.K. Taxali, Tata McGraw Hill Publishers

Unit I - Chapter 1, 8,12,15,16

Unit II - Chapter 21,22,23,28

Unit III - Chapter 29,30,31,32

2. Introduction to Information Technology-ITL Education Solution Limited.

Unit III- Chapter 13, 20

3. DTP Course –Shirish Chavan, Unicorn Books Publisher.

Unit III - Chapter 1

Unit IV - Chapter 2, 3

Unit V - Chapter 4,5,6,7

REFERENCE BOOK:

1. Introduction to Information Technology-ITL Education Solutions Limited.

STATISTICS

Semester: I

Subject Code:

Hours/Week: 4

Credits: 2

UNIT - I

Meaning and Definition of statistics-Importance Functions, Limitations-Misuse of Statistics, Statistical Survey and Collection of data-Sampling and Sampling design-Classification-tabulation-Diagrams-Graphic representation.

UNIT - II

Curve Fitting – Principles of Least Squares – Fitting Straight line. A Second Degree Parabola – Fitting curves of the exponent form.

UNIT - III

Measures of central tendency-Mean, Median quartiles, mode, geometric mean and harmonic mean-weighted average-Measure of dispersion-range-quartile deviation-mean deviation-Standard deviation-Lorenz Curve-Co-efficient of variation.

UNIT - IV

Correlation analysis-grouped and ungrouped data-Karl Pearson's Co-efficient of correlation-rank correlation co-efficient and co-efficient of concurrent deviation-linear regression analysis-Multiple regression.

UNIT - V

Index Numbers-Aggregate-Average of price relative-Weighted Index Numbers-Weighted Average of price relative-Cost of living index number-conversion of CBI to FBI

TEXT BOOKS:

1. “Business Statistics” – R.S.N.Pillai & Bagavathi S.Chand & Co.,New Delhi.

Unit I-Chapter 1, 2,3,4,5,6,7,8

Unit III -Chapter 9

Unit IV-Chapter 12, 13

Unit V-Chapter 14

2. “Arumugam & Isaac”,Statistics New,Gamma Publishing House,Palayamkottai.

Unit II-Chapter 5

REFERENCE BOOKS:

1. Arumugam & Issac, Statistics, New Gamma Publishing House, PalayamKottai.
2. S.P.Gupta., Statistics, S. Chand & Sons.
3. Robert V. Hogg and Allen T. Craig, Collier Introduction to Mathematical
Statistics,Macmillan International Edition.

PC – SOFTWARE LAB

Semester: I

Subject Code:

Hours/Week: 3

Credit: 3

MS-WORD

1. Create a word document with page number, Header and Footer and format the text.
2. Draw Border lines, Chart, shapes and color it.
3. Create a page with text watermarking, picture watermarking and change the page color.
4. Create a table and use their properties.
5. Create a paragraph and implement
 - (a) Find and replace concept.
 - (b) Newspaper Format with Drop cap.
6. Implement Word art and symbols.
7. Send an invitation using Mail Merge.
8. Create a Hyperlink and open already existing file
9. Implementation of Quick Parts.

MS-EXCEL

10. Create the following Worksheet in Excel:

S.No.	Reg.No	Name	Age	Eng	Tam	Mat	Total	Average	Result
1.	121	Ram	20	45	40	53			
2.	153	Raj	19	50	52	63			
3.	110	Balu	21	87	76	62			
4.	140	Suresh	22	38	60	65			
5.	109	Mary	23	71	20	84			

- (a) Find the Total, Average and Result for the previous worksheet.

- (b) Sort the content of the table by Reg.No.
- (c) Sort the content of the table by Name.
- (d) Sort the content of the table by Age.
- (e) Find the Maximum mark for each subject.
- (f) Find the Minimum mark for each subject.
- (g) Filter the Candidates whose Reg.No. ≥ 140
- (h) Filter the Candidates whose Name = "Suresh"
- (i) Filter the Candidates whose Eng > 60 .

11. Create the following worksheet in Excel:

YEAR	SALES	EXPENSE
1990	20	25
1991	25	12
1992	35	18
1993	42	25

- (a) Draw the Graph and mention the Appropriate Headings
 - (b) Experiment with other types of graphs by changing your selections.
 - (c) Include more columns with data values and create different types of graphs.
12. Create a worksheet for Hotel Management
13. Create a worksheet for Hostel Management
14. Create a worksheet for Electricity Bill Calculation

MS-POWER POINT

15. Create a power point presentation about Computers.
- (a) Insert clip arts and pictures.
 - (b) Insert new slides.
 - (c) Use of design templates.
 - (d) Change the Slide Layout.
 - (e) Animation Effects.

16. Create a power point presentation for any organization.
17. Create a PowerPoint presentation and implement hyperlink and navigation between slides.
18. Create a photo album using PowerPoint.
19. Create a PowerPoint Presentation with video and sound.
20. Create a power point Presentation with Smart art Graphics.
21. Use objects in PowerPoint Presentation and insert MS-Word application to the presentation.

MS-ACCESS

22. Create Address Table with following Fields

Field Name	Data Type
Name	Text
Age	Number
Gender	Text
Street	Text
City	Text
Pincode	Number

- (a)Add 10 Records.
- (b)Display the fields Name, Street alone on the Screen.
- (c)Display the records for Age > 20
- (d)Display the records for Age < 20 and City = “Chennai”.
- (e)SORT the table in the ascending order of Name.

23. Create Student Table with the following fields:

Field Name	Data Type
Name	Text
Age	Number
Gender	Text
Degree	Text
Percentage	Number

- (a)Add some records

- (b) Display the records for Gender = "M" and Degree = "MCA"
- (c) Display the records for Gender = "F" and percentage between 70 and 80
- (d) Display the records for Degree = "MCA" and Name like "M"
- (e) Sort the table in the Descending order of Percentage.

24. Create SALE Table with the following fields

Field Name	Data Type
Name	Text
Gender	Text
Sales Code	Number
Sales Amount	Number

- (a) Add Some Records using FORMs
- (b) Display the records for Sale Amount > 5000 and gender = "M"
- (c) Display the records for Sex = "F" and Sale Amount BETWEEN 5000 and 10000
- (d) Display the records for Sale Amount <= 5000
- (e) Sort the table DESENDING order of Sale Amount.
- (f) Modify the structure of table.

25. Create Library Table with the following fields

Field Name	Data Type
Book No.	Number
Title	Text
Author	Text
Price	Number
Publisher	Text
Branch	Text

- (a) Display the records for Title = "Office Automation" and Author like "M"
- (b) Display the records for Book Number = 500 and Branch = "CS"
- (c) Display the records for Publisher = "PHI" or Publisher = "BPB" and Price between 300 and 900.
- (d) Sort the table in ASCENDING order of Book Number.

DESKTOP PUBLISHING LAB

Semester: I

Subject Code:

Hours/Week: 3

Credit: 3

COREL DRAW

1. Create Logo design.
2. Create Letter Pad design.
3. Create College Application Form.
4. Create a Visiting card.

PAGE MAKER

5. Create a Resume.
6. Create a Feedback Form.
7. Create a Book Cover.
8. Design a Photo effect.
9. Create a Question paper.
10. Create a Marriage Invitation.
11. Create a Green card in word to import PageMaker.
12. Create a Prospectus for an Institution.

PHOTOSHOP

13. Create a Sport Day Invitation for a College.
14. Create Annual Day Invitation for a College.
15. Create a department function (Glitz'11) invitation.
16. Create an invitation for Technical Seminar.
17. Modify photo effect in Photoshop.
18. Create a text design and use different colors.
19. Create a Greeting Card for Birthday.
20. Create a Wall Paper.

PROGRAMMING IN C

Semester: II

Subject Code:

Hours/Week:6

Credit: 6

UNIT - I

Overview of C – Basic Structure – Simple Programs – C Tokens – Keywords and Identifiers – Constants – Variables – Data Types – Operators Decision Making and Branching: Simple IF –IF .. Else- Nested IF .. Else – Else IF Ladder- switch – Conditional Operator – While – Do While – For – Jumps in Loops.

UNIT - II

Arrays and Strings: Introduction – One Dimensional Array – Declaration – Initialize the variable in array – Two Dimensional Array – Multidimensional Array – Dynamic Arrays – Declare and Initialize string variables – String Handling functions – Other features of strings.

UNIT - III

Functions and Pointers: Introduction – User Defined Functions - Multifunction – Elements of User defined functions – Definition of function – Return values and types – Function Calls – Declaration – Category of Functions – Nesting Functions – Recursion – Pointers – Declaring Pointer variables – Pointers Expression – Pointers and Arrays – Pointers to Functions – Function returning pointers.

UNIT - IV

Structures and Unions: Introduction – Defining a Structure – Declaring structure variables – Accessing structure members – Structure initialization – Array of Structures – Structures within structures – Structures and Functions – Unions – Size of structures – Bit Fields

UNIT - V

File Management: Introduction – Defining and Opening a File – Closing a file – I/O operations on Files – Error Handling during I/O operations – Random Access Files – Command Line Arguments.

TEXT BOOK:

E.Balagurusamy, “Programming in ANSI C”, 4th Edition, Tat McGraw Hill, New Delhi.

Unit I - Chapter 1, 2,3,5,6

Unit II - Chapter 7, 8

Unit III - Chapter 9, 11

Unit IV - Chapter 10

Unit V - Chapter 12

REFERENCE BOOK:

Byron S.Gottfried, “Programming with C”, Tata McGraw Hill, New Delhi, 2002.

DISCRETE MATHEMATICS

Semester: II

Subject Code:

Hours/Week: 4

Credit: 2

UNIT - I

Set Theory – Introduction – Sets – Notation and Description of Sets – Subsets – Venn – Euler Diagram – Operation on Sets – Properties of Set Operation – Verification of the basic laws of algebra by Venn diagram – The principle of duality.

UNIT - II

Matrix Algebra-Introduction-Matrix Operations-Inverse of a square Matrix-Elementary operations and rank of a matrix-Simultaneous Equations-Eigen Values and Eigen Vectors.

UNIT – III

Lattices – Some properties of Lattices – New lattice – Modular and distributive lattices – Boolean algebra

UNIT – IV

Logic – Introduction – TF stn – Connectives – Atomic and compound statement – well formed formula – Truth Table of a formula – Tautology – Tautology implication and equivalence of formula – Replacement process

UNIT - V

Four Classes of grammar (phrase structure, context sensitive, context free, regular) - Context Free Language – Generation tree – ambiguity – FAS – NDFSA – Conversion of NDFSA to DFSA.

TEXT BOOK:

1. “Discrete Mathematics”, M.K. Venkataraman, N. Sridharan, N. Chandra Sekaran, National Publishing Company, Chennai.

Unit I-Chapter 1, Section 1 to 9

Unit II-Chapter 9, Section 1 to 9

Unit III-Chapter 6, Section 1 to 5, 7

Unit IV-Chapter 10, Section 1 to 5

Unit V-Chapter 12, Section 1 to 10, 13,16,17,19

REFERENCE BOOKS:

- 1.”Discrete Mathematical Structure with Applications to computer Science”, J.P. Trembly and R. Manohar, McGraw Hill.
2. “Applied Discrete Structure of Computer Science”, Derror Alan and Levasseur Kenneth, Galgotia Publications Pvt. Ltd., New Delhi.

PROGRAMMING IN C LAB

Semester: II

Subject Code:

Hours/Week: 3

Credit: 3

1. Standard Deviation
2. Prime Number Checking
3. Adam Number Checking
4. Perfect Number Checking
5. Pascal triangle
6. Matrix Addition and Subtraction using Switch
7. Sum of the Digit
8. Magic Square
9. Sorting Numbers using Array
10. String Functions
11. Recursive Function
12. Swapping values using Function
13. EB Bill Calculation
14. Mark Sheet Preparation
15. Factorial of a number
16. Find NCR value using function
17. Student Details using Pointers
18. Employee Details using Structure
19. File Creation
20. Write Characters in a file
21. Read Characters in a file

WEB DESIGNING LAB

Semester: II

Subject Code:

Hours/Week:3

Credit: 3

1. Write a HTML program using simple tags.
2. Write a HTML program to design a page using background color and font color
3. Write a HTML program to scroll a message using Marquee tags.
4. Write a HTML program using pre tag.
5. Write a HTML program using hyperlink to link web pages.
6. Write a HTML program using link tag to link a section in a page.
7. Write a HTML program using ordered list
8. Write a HTML program using unordered list
9. Write a HTML program using definition list
10. Write a HTML program to display image.
11. Write a HTML program to create table with and without border.
12. Write a HTML program to prepare time table
13. Write a HTML program to display image in table.
14. Write a HTML program to design Bio-data form
15. Write a HTML program to create Railway reservation form
16. Write a HTML program for Email ID creation form
17. Write a HTML program using Frame
18. Write a HTML program to design College Web page.
19. Write a HTML program to design Jewellery web page.
20. Write a HTML program to design Google Home Page.

DATABASE MANAGEMENT SYSTEM

Semester: III

Subject Code:

Hours/Week:4

Credit: 3

UNIT- I

Introduction: Data-Information-Quality of Information-Information Processing-Information and the Enterprise-Introduction of Database Management System- Database Management System-Types of Database Management System-Entity Relationship Model: Basic concepts-design issues-mapping constraints-keys-ER diagram-weak entity set-extended ER features.

UNIT- II

Introduction: SQL- The Basic parts of speech in SQL – SQL & SQL * PLUS – Getting Text Information & changing it – playing the Numbers – dates: Then, Now & the Difference – Conversion & Transformation functions.

UNIT- III

SQL *PLUS commands – Grouping things together – when one query depends upon another –Building a report in SQL *PLUS – changing Date – Insert, Update, Merge & Delete – Advanced use of functions and variables – DECODE & case; if the, and else in SQL - index ,clusters, sequences.

UNIT- IV

Queries: using SQL *loader to load data – Accessing Remote Data using materialized views – using Oracle Text for Text Searches – Using External Tables – Using flashback Queries.

UNIT- V

PL/SQL: An introduction to PL/SQL – Triggers – Procedures functions & Packages

TEXT BOOK:

Database Management System” by Alexis Leon, Matthews Leon
Unit I-Chapter 1,5

Kevin Loney, George Koch & The Exports at JUSC, 2002, Oracle 9i The Complete Reference, Tata McGraw Hills Publications, New Delhi.

Unit II-Chapter 5 -11

Unit III-Chapter 12,13,15- 17

Unit IV-Chapter 21,24,25-27

Unit V-Chapter 29-31

REFERENCE BOOK(S)

George Koch, Kevin Loney, 1998, Oracle 8 The Complete Reference, Tata McGraw Hill, New Delhi.

Raguramakrishnan, 2002, Database Management Systems, Tata McGraw Hill, New Delhi.

OBJECT ORIENTED PROGRAMMING IN C++

Semester: III

Subject Code:

Hours/Week:4

Credit: 3

UNIT 1

Introduction : Principles of Oop – Software Evolution – Oop Paradigm – basic Concepts of Oop – Benefits of Oop object oriented languages – Applications of Oop.

Introduction to C++: Tokens, Keywords, Identifiers, Variables, Operators, Manipulators, Expressions, Control Structures in C++.

UNIT 2

Function – Main Function – Function Prototyping – Call By Reference – Return by Reference – Function Overloading – Friend Function – Virtual Function.

UNIT 3

Classes & Objects – Constructor – Destructor – Operator Overloading – Type Conversion – Templates.

UNIT 4

Inheritance – Classification of Inheritance – Pointers – Polymorphism – Managing Console I/O Operations.

UNIT 5

Files: Classes for file stream operation – open a file – closing a file – End – of – file.

Text Book :

E.Balagurusamy “Object oriented programming with C++”, TataMcGrawHill

UNIT I – Chapter 1,2,3

UNIT II – Chapter 4

UNIT III – Chapter 5,6

UNIT IV – Chapter 7,9

UNIT V – Chapter 11

Reference Book :

A.R.Venugopal, Rajkumar, T.Ravishanker, “Mastering C++”.

COMPUTER GRAPHICS

Semester: III

Subject Code:

Hours/Week:4

Credit: 3

UNIT I

Introduction : GKS – PHIGS – Applications – Display Devices – Raster Scan Systems – Random scan systems – Input Devices.

UNIT II

Output Primitives : Line Drawing algorithm – DDA – Bresenham's Line drawing algorithm – Bresenham's Circle Drawing algorithm – Filled Area Primitives.

UNIT III

Attributes of output primitives : Line – Area Fill – Character – Text – Marker – Bundled Attributes – Inquiry Functions.

UNIT IV

2D Transformations : Translation – Rotation – Reflection – Scaling – Matrix Representation – Viewing Function.

UNIT V

Clipping : Introduction – Cohen Sutherland line Clipping – Sutherland Hodgman Polygon Clipping – Point, Text, Exterior Clipping operations.

Text Book :

Donald Hearn & Pauline Baker, “Computer Graphics”, Publication of Prentice Hall of India.

UNIT I – Chapter 1, UNIT II– Chapter 2, UNIT III – Chapter 6, UNIT IV – Chapter 7

UNIT V – Chapter 8

Reference Book : David F.Rogers, “Procedural Elements for Computer Graphics”, MC GrawHill International Editions.

ACCOUNTING SOFTWARE

Semester: III

Subject Code:

Hours/Week:4

Credit: 3

UNIT - I

Introduction to Tally- Tally Fundamentals-Features of tally-tally screen
Components-Mouse or Keyboard conventions-Maintaining company data-Functions keys:
Accounting and inventory Function Keys-All Short Cut Keys in Accounting software- 9

UNIT - II

Groups & Ledgers :- Classification of groups & ledgers-predefined groups of
accounting software- concepts of groups & ledgers-Create, Alter , Delete single & multiple
groups & ledgers.

UNIT - III

Maintaining stock details-Inventory accounting with Tally with Tally Inventory
master-Create, Alter, delete Stock group, Stock Categories, Stock godowns-Units and
Compound unit of measurement-Accounting vouchers, Inventory vouchers.

UNIT - IV

Invoicing- Payroll: Enabling payroll in Tally-pay Heads-Employee Groups-
Employees-Salary Details-TDS-VAT Classification.

UNIT - V

Display & Reporting-Financial Reports in Tally-Display books of Accounts &
Statements of Accounts-Group summary & Group Vouchers-Inventory Reports-VAT Reports –
Email in Accounting Software.

Text Book:

Accounting with Tally – K.K.Nadhani

OPERATIONAL RESEARCH

Semester: III

Subject Code:

Hours/Week:4

Credit: 2

UNIT 1

L.P.P. – Formulation of L.P.P. – Graphical Method – Basic Solution – BFS – Artificial Method – Big-M method – Two Phase Method.

UNIT - II

Transportation Model – Mathematical Formulation of Transportation Problem – Methods for Finding IBFS – NWC – LCM – VAM – MODI Method – Degeneracy – Unbalanced – Maximization Case in Transportation Problem.

UNIT - III

Assignment Problem – Mathematical Formulation of Assignment Problem – Comparison with Transportation Model – Difference between the Transportation and Assignment Problem – Hungarian Method – Unbalanced Assignment – Maximization Case in Assignment – Restriction in Assignment – Traveling Salesman Problem.

UNIT - IV

Game Theory – 2X2 Game – Maximin – Minimax Principle – Saddle Point and Value of Game – Game without Saddle Point – Arithmetic Method – $2 \times n$ – $m \times 2$ – Graphical Method – Dominance Property.

UNIT - V

Scheduling by PERT and CPM – Planning – Scheduling – Control – Basic Terminologies – Rules for Constructing a Project Network – Network Computation – Compute the Latest Finish and Latest Start – Float – Program Evaluation Review Technique – Difference Between PERT & CPM.

TEXT BOOK:

1. “Operation Research “, V.K. Kapoor, Sultan Chand & Sons Publishers, Delhi.

REFERENCE BOOKS:

1. “Operation Research: An Introduction”, Hamdy. A, Taha, Macmillan International Student’s Edition, Delhi.
2. “Operation Research”, Kanti Swarup, R.K. Gupta and Manmohan, Sultan Chand and Sons, Delhi.

PROGRAMMING IN C++ LAB

Semester: III

Subject Code:

Hours/Week:2

Credit: 2

1. Simple c++ program using class.
2. Write a c++ program to implement inheritance & virtual function.
3. Write a c++ program to implement multiple inheritance.
4. Write a c++ program to implement multilevel inheritance.
5. Write a c++ program to implement hybrid inheritance.
6. Write a c++ program to implement hierarchical inheritance.
7. Write a c++ program to implement operator overloading(+,*,/,-).
8. Write a c++ program to implement '++' operator to overload.
9. Write a c++ program to implement friend function.
10. Write a c++ program to implement constructor & destructor.
11. Write a c++ program to implement function overloading.
12. Write a c++ program to implement stack.
13. Write a c++ program to implement queue.
14. Write a c++ program to implement matrix addition using operator overloading.
15. Write a c++ program to implement matrix multiplication using operator overloading.

ACCOUNTING SOFTWARE LAB

Semester: III

Subject Code:

Hours/Week:2

Credit: 2

1. Create a Company in Tally.
2. Alter and Delete Company Information.
3. Create a Single Group and Single Ledger.
4. Alter and Delete the Group and Ledger.
5. Create a Multiple Group and Multiple Ledger.
6. Alter and Drop Multiple Group and Ledger.
7. Create Simple and Composite Unit of measure.
8. Alter and Delete Simple and Composite Unit of measure.
9. Create Single Stock Group and Stock Item.
10. Alter and Delete Stock Group and Stock Item.
11. Create Multiple Stock Group and Stock Item.
12. Alter and Delete Stock Group and Stock Item.
13. Create Stock Godowns.
14. Alter and Display Stock Godowns.
15. Create Cost Center, Cost Categories.

DATABASE MANAGEMENT SYSTEM LAB

Semester: III

Subject Code:

Hours/Week:2

Credit: 2

1. Data Definition Language (DDL) Commands in SQL.
2. DML and DCL commands
3. High –level language extension with cursors.
4. High-level language extension with Triggers.
5. Creating Tables for Different Applications using DDL.
6. Solving Queries-Date Functions, Numeric Functions, Group Functions.
7. Set Operators-Union, Union All, Intersect, Minus.
8. SimpleJoin,TableAliases,Self-join,Outerjoin,SubQueries, Multiple sub queries.
9. Procedures and Functions.
10. Design and implementation of Payroll Processing System.
11. Design and implementation of Banking System.
12. Design and implementation of Library Information system.
13. PL/SQL
14. Creating PL/SQL block using all the control statements.
15. Creating PL/SQL block using EXPLICIT & IMPLICIT CURSOR.

NME
FUNDAMENTALS OF COMPUTERS

Semester: III

Subject Code:

Hours/Week:2

Credit: 2

Unit I

Introduction – Introduction to computers – Evolution – Generation of computers – Computers Hierarchy – Applications of computers

Unit II

Windows Basics – Introduction to word – Editing a document – Move and Copy text – Formatting text & Paragraph – Enhancing document – Columns, Tables and other features.

Unit III

Introduction to work sheet and shell – getting started with Excel – Editing cell & using commands and functions – moving & copying, inserting & deleting rows & columns – printing worksheet.

Unit IV

Creating charts – Naming ranges using statistical, math and financial functions, database in a worksheet – additional formatting commands and drawing toolbar – other commands & functions – multiple work sheet and macros.

Unit V

Overview of Power point – Presenting shows for corporate and commercial using power point – introduction to desktop publishing – computer viruses – introduction to internet – web features.

Text Book

Computer Fundamentals – Raja Raman – Prentice Hall of India 2004.

PC Software for windows 98’ made simple – R.K. Taxali – Tata McGraw Hill Publishers, 2005.

UNIT I – Chapter 1, UNIT II – Chapter 4, UNIT III – Chapter 5, UNIT IV – Chapter 6

UNIT V – Chapter 7

Reference Book

Digital Circuit & Design – S. Salivahanan, S. Arivazhagan – Vikas Publishing House Pvt. Ltd., 2002

SELF STUDY
WEB DESIGNING

Semester: III

Subject Code:

Hours/Week:

Credit: 3

UNIT - I

Introduction to Internet - History of Internet-Internet Services & Accessibility - Uses-Protocols - Internet Applications- Application Protocols

UNIT - II

HTML: Introduction – SGML – DTD - Outline of HTML Document - Head Section Prologue – Link - Base Media - Script – Style – Body Section – Headers – Paragraphs – Text Formatting – Linking – Images – Lists – Tables – Frames – Other special tags & characters – HTML Forms.

UNIT - III

JAVA Script: Introduction – Identifiers – Expressions - Keywords – Operators – Statements – Functions – Objects of Java Script – Other Objects – Arrays.

UNIT - IV

VBScript: Introduction – VB Script code in HTML Document – Comments – Variables – Operators – Procedures – Conditional Statements – Looping – Objects & VB Script – Cookies

UNIT - V

DHTML – Introduction – Coding CSS – Properties of tags – Property Values – Types of Sheets – HTML Vs XML syntax – XML Attributes.

TEXT BOOK:

“Web Technology” – N.P.Gopalan , J.Akilandeswari.

Unit – I : Chapter 1, 2

Unit – II : Chapter 4

Unit – III : Chapter 5

Unit – IV : Chapter 7.1, 7.2

Unit – V : Chapter 8.2, 8.4

VISUAL BASIC PROGRAMMING

Semester: IV

Subject Code:

Hours/Week:5

Credit: 3

UNIT I

Starting a new project – the properties of window, common form properties, scale properties, colour properties, making a form responsive, Printing a visual representation of a form, typos, creating stand _alone windows programs, the tool box, creating controls, the name (Control Name) property, properties of command buttons, access keys, Image Controls, text boxes, Navigating between controls, message boxes, the ascii representation of forms.

Unit II

Statements in visual basic, variables, setting properties with code, data types, working with variables, more on strings, constants, input boxes, displaying information on a form, the format function, picture boxes, rich text boxes, the printer object, determine loops, indeterminate loops, making decisions, select case, nested if –then, the Goto, String function.

Unit III

Function Procedures, sub procedures, advanced uses of procedures and functions, list: One dimensional arrays, Arrays with more than one dimension , using lists and arrays with functions and procedures, the new array - based string – records (User defined types)

Unit IV

The with statement, enums, control arrays, list and combo boxes, the flex grid control, code modules, global procedures, creating an object in visual basic, building your own classes.

Unit V

ADO – with control – without control – DAO – with control – without control – ODBC – with control – ODBC without control – Data Report.

Text Book(s):

“Visual Basic 6 from the ground up” GRAY CORNELL, TMH Edition 1999

Unit I-Chapter 3,4,5

Unit II-Chapter 5,6,7,8

Unit III-Chapter 9,10

Unit IV-Chapter 11,12,13,14

“Programming in Visual Basic” MOHAMMED AZAM

Unit V-Chapter 12,13,15,16

Reference:

“Teach Database programming in visual basic”

Web sites available to Visual programming.

JAVA PROGRAMMING

Semester: IV

Subject Code:

Hours/Week:4

Credit: 3

UNIT- I

History of java-Java features- OOPs Introduction-Methods and objects Constructors-Constructor Overloading –Methods Overloading.

UNIT- II

Arrays - Types of arrays - String libraries - String functions-Inheritance - Types of Inheritance - Using super - Method Overriding - Interface (Multiple inheritance) – Exception Handling-Exception types-Built in Exception.

UNIT- III

Packages-Defining Packages - Default Packages - User defined packages -Importing packages - Thread Model – Thread priorities - The Main Thread – Thread Creation – Multithreading - Synchronization.

UNIT- IV

Applet Introduction-Applet class-Applet initialization and termination-Simple applet display methods-HTML APPLET tag-I/O Streams-AWT classes-. Window fundamentals - Working with graphics-working with colors.Converting numbers and from sstrings.

UNIT- V

Introduction to Swings-Exploring swings- Introduction to Networks-Network basics-TCP/IP .,control fundamentals ,

TEXTBOOK:

1.”The Complete Reference”-Herbert Schildt ,V Edition. Unit I-Chapter 1,2,7,Unit II-Chapter 3,8,10,13,Unit III-Chapter 9,11, Unit IV- Chapter 12,21,Unit V-Chapter 18,2,chapter 22,14.

REFERENCE BOOK:

1.”Programming with Java”-E.Balagurusamy,TataMcGraw-Hill Publishing Company, New Delhi.

DATA STRUCTURES

Semester: IV

Subject Code:

Hours/Week:4

Credit: 3

UNIT - I

Introduction : Overview – how to create program. Arrays: ordered lists – sparse matrices – representation of arrays.

UNIT - II

Stacks and queues: Fundamentals – evaluation of expression – multiple stacks and queues.

UNIT - III

Linked lists : singly linked lists – linked stacks and queues – polynomial addition – more on linked lists – sparse matrices – doubly and circular linked lists.

UNIT - IV

Trees: basic technology – binary trees – binary tree representations – binary tree traversal – more on binary tree – threaded binary tree – binary tree representation of trees – application of trees – binary trees.

UNIT - V

Graphs: terminology and representations – traversals, connected components and spanning trees – shortest paths and transitive closure – topological sort.

Text Book :

ELLIS HOROWITZ & SARTAJ SAHANI, **FUNDAMENTALS OF DATA STRUCTURES**, Galgotia Book Source Publishers.

UNIT I – Chapter 1,2 - UNIT II – Chapter 3, UNIT III – Chapter 4, UNIT IV – Chapter 7

UNIT V – Chapter 8

Reference Books

1. Aaron M.Tennenbaum, YedidyLangsam, Moshe J.Augenstein,
Data Structure using C, Prentice Hall of India Latest Edition.

NUMERICAL METHODS USING C

Semester: IV

Subject Code:

Hours/Week:4

Credit: 2

Unit-1:

Solution of Linear system by Gaussian elimination and Gauss Jordan methods- Iterative methods:- Gauss Jacobi and Gauss Seidal methods.

Unit-2:

Lagrangian Polynomials- Lagrangian interpolation – Divided differences – Finite differences, Forward, Backward and Central differences – Newton's forward and backward.

Unit-3:

Numerical differentiation- Newton's Formula- Newton's integration – Trapezoidal rule, Simson 1/3 rule- Simson 3/8 rule.

Unit-4:

Types of iteration methods- Bisection methods – False position method – Newton Raphson method – The method of Successive Approximation.

Unit-5:

Writing Program in C- Gauss Elimination method – Gauss Jacobi iteration method - Gauss Seidal Iteration method- Newton's Forward Interpolation – Newton's Backward Interpolation.

TEXT BOOKS:

1. "Numerical Methods" by Kandasamy.P., Thilagavathy.K. And Gunavathy.K., Scand Co. Ltd., New Delhi.

Unit I-Chapter 4, Section 4.1-4.2.1,4.7-4.9

Unit II-Chapter 8, Section 8.1-8.8

Chapter 5, Section 5.1-5.2

Chapter 6, Section 6.1-6.7

Chapter 7, Section 7.1-7.4

Unit III-Chapter 9, Section 11.5-11.7, 11.9, 11.11, 11.12-11.4.

- 2."Numerical methods With Programming in C" Arumugam and Issac.

VISUAL BASIC PROGRAMMING LAB

Semester: IV

Subject Code:

Hours/Week:2

Credit: 2

CYCLE – I

Program to check whether the given number

Armstrong Number

Adam Number

Program to perform

Reverse the String

Calculate the length of the String

Program to find the

Current Date and Time

Day of given Date

Program to use the flex grid control

Program to draw geometric shapes

Program to design a digital clock

CYCLE – II

Program to vary color palette

Program to show picture animation

Program to create a file open dialogue to load picture

Program to design a arithmetic calculator

Program to create a mouse down event program

CYCLE – III

Menu Creation with simple file and edit operation

Process Students' mark list using data control

Process library maintenance using data control

Process telephone billing using data control

Process stock inventory using data control

JAVA PROGRAMMING LAB

Semester: IV

Subject Code:

Hours/Week:2

Credit: 2

1. Write a Java program to accept a number and then print the number in words.
2. Write a java program to find rank of student.
3. Write a java program for multiplication table using words.
4. Write a java program for number sorting using Arrays.
5. Write a java program to perform the following string operations
 - (a) Reverse a given String
 - (b) Copy a String
 - (c) Concatenate two string
 - (d) Compare two strings
 - (e) Length of String.
6. Write a java program to implement bank transaction using interface.
7. Write a java program for the following

One thread to generate perfect number between the given ranges, another thread to generate the twin prime number between the given range
(e.g. 11 & 13, 17 & 19--- Twin Prime numbers).
8. Write a java program to find the Exception marks out of bounds.
9. Write a program to find the Exception number format error.
10. Write a program to create Exception.
11. Write an applet program for Our National flag(Animate Chakras).
12. Write an applet for continuously scrolling a given message in both directions.
13. Write an applet program to load a image file continuously in a applet viewer with certain time interval.
14. Design a webpage for a computer centre using applets.
15. Write an Applet program for Application form. It includes Text field, checkbox, Radio button, Text area and choice list. From the percentage of marks obtained in UG courses can be allocated. (If the percentage is below then allocate any course according to the percentage of marks.)

SCRIPTING LAB

Semester: IV

Subject Code:

Hours/Week:2

Credit: 2

JAVA SCRIPT

- 1) Write Program Mac but no Internet Connection.
- 2) Write Program for Windows but no Internet Connection.
- 3) Write Program for a Mac Or Windows machine Connection.
- 4) Write Program for Dream weaver on your computer.
- 5) Write Program for adding comment using Printing text.
- 6) Write Program Using variable to store string of character .
- 7) Write Program Using Variable to store number & Exercise.
- 8) Write Java Script program that adds two number together .
- 9) Write Program Loop in Java Script.
- 10) Write Program Challenging problem of Day.

VB SCRIPT

- 10) Write Program any statement using only one write() or writeln() command.
- 11) Write Program Embed VBScript in HTML document asking user name and then printing Hello.
- 12) Write Program to Create a Message Box creating "Welcome to PCTI website"
- 13) Write program Evaluate the Expression.
 - a) 7+5
 - b) "7"+"5"
 - c) 7*5
 - d) 7/5
 - e) 7%5
- 14) Write Program the procedure for an Object called car with four properties model, make, year & price and accept the value from the user.
- 15) Write a program to display multiplication table.
- 16) Write program a code to creating scrolling text in a text box.
- 17) Write a program to move a text with mouse pointer.
- 18) Write a program to change color of text randomly.
- 19) Write a program create a Webpage using two Image file which between one another as the mouse pointer moves over the Image.
- 20) Write a program VBScript code to accept radius and display the area of circle.
- 21) Write a program Use the date function getDate and setDate to prompt the user for an integer between 1-31 and return day of the week it represent.
- 22) Write a program display a time and print message accordingly for eg. Goodmorning etc.
- 23) Write a program Use VBScript for authentication and verification of the textboxes in the static developed by the student in the HTML.
- 24) Write a program to scroll the text on status bar.

ELECTIVE -I

1. DIGITAL PRINCIPLES AND COMPUTER ARCHITECTURE

Semester: IV

Subject Code:

Hours/Week:3

Credit: 2

Unit I

Number Systems and Discrete Logic – Why Binary – binary to decimal – decimal to binary – octal – hexa decimal – ASCII code – Excess 3 code – logic gates: - OR gate – AND gate – NOT gate Universal gates: - NOR gate – NAND gate, Boolean Algebra.

Unit II

Flip-flops, Clock and Timers – RS flip-flop – D flip-flop – JK flip-flop – JK Master Slave flip-flop – Schmitt Trigger – 555 Timer Astable – 555 Timer Mono stable – 555 Timer Schmitt Trigger.

Unit III

Micropogrammed Control – Control Memory – Address Sequencing – Pipeline and Vector Processing – Parallel Processing –Arithmetic Pipeline – Instruction Pipeline – RISC Pipeline – Vector Processing – Array Processors.

Unit IV

Central Processing Unit – Introduction – General Register Organization – Stack Organization – Instruction Formats – Addressing Modes – Program Control – CISC and RISC.

Unit V

Memory Organization – Memory Hierarchy – Main Memory – Auxiliary Memory – Associative Memory – Cache Memory – Virtual Memory – Memory Management Hardware.

TEXT BOOK

“Digital Principles and Applications”, by Albert Paul Malvino & Donald P. Leach, 4th Edition, Tata McGraw-Hill Edition.

UNIT I – Chapter 2, 3, 5

UNIT II – Chapter 9

Carl Hamacher, Zvonko Vranesic and Safwat Zaky, 5th Edition “Computer Organization”, McGraw-Hill, 2002.

UNIT III – Chapter 3,

UNIT IV – Chapter 4, 5

UNIT V – Chapter 6

Reference Book(s)

John P. Hayes, “Computer Architecture and Organization”, 3rd Edition, McGraw Hill, 1998.

Morris Mano, “Computer System Architecture”, 3rd Edition, Pearson Education.

ELECTIVE – I

2. SYSTEM SOFTWARE

Semester: IV

Subject Code:

Hours/Week:3

Credit: 2

UNIT I

Introduction – System Software and Machine Architecture – Simplified Instructional Computer (SIC) – SIC Machine Architecture – SIC/XE Machine Architecture- Traditional (CISC) Machine – Pentium Pro Architecture – RISC Machine UltraSPARC Architecture- Cray T3E Architecture.

UNIT II

Assemblers – Basic Assembler Function – A simple SIC Assembler- Assembler Algorithm and Data Structure – One pass Assemblers – Multi –pass Assemblers.

UNIT III

Loaders & Linkers : Basic Loader Functions – Design of Absolute Loader – Simple Bootstrap Loader – Machine Dependent Loader features.

UNIT IV

Macro processor – Basic macro processor function – Machine independent macro processor features.

UNIT V

Other System Software : Text Editors – Interactive Debugging Systems.

Text Book

Leland L.Becl, “a System Software – An Introduction to System Programming “ , 3rd Edition, Pearson Education Asia ,2000.

UNIT I: Chapter 1(1.1 to 1.3, 1.4,1.4.1,1.4.2,1.5,1.5.1,1.5.3)

UNIT II: Chapter 2(2.1&2.4)

UNIT III: Chapter 3 (3.1 & 3.2)

UNIT IV: Chapter 4(4.1,4.2)

UNIT V: Chapter 7(7.2&7.3)

REFERENCE BOOKS:

- 1.D.M. Dhamdhere, “System Programming and Operating System” , Second Revised Edition , Tata McGraw-Hill, 1999.
- 2.John J.Donovan “System Programming”, Tata McGraw-Hill Edition, 1972.

NME
DESKTOP PUBLISHING

Semester: IV

Subject Code:

Hours/Week:2

Credit: 2

Unit-I

Introduction: H/W Requirement- Software Requirement DTP Operators Arsenal I/O Devices & Storage – Fonts - Drop caps – Character & paragraph level formatting – Hyphenation – Alignments – Indentation – Single & Double sided documents – headers & footers – footnotes & endnotes – Select Text & Graphics – Graphic file formats – Half tone images – Clear Half tone images – Generic Process.

Unit - II

CorelDraw: Introduction – Opening a existing Drawing – the Dialog box open Drawing – Status bar – Cartesian Coordinates – Property Bar – Creating a Text file – Basic Terms – Toolbox – page & Paste Board – Std Tool bar – handle Shapes using property bar – Rotating objects – Line & arrows – Page & Doc setup – Docker windows – Using text – Using Library of clip arts & bitmap images – fun with Artistic media tool

Unit - III

Photoshop : Introduction – Opening an Image – Saving an Image – Closing an Image & Shutdown Photoshop – Creating a new Image- Using Toolbox – Tool Options bar – Using layers – seek help – Fascinating colors – Insert text Images – Printing Images – Filter to import Images

Unit - IV

PageMaker:Introduction – Creating new Publications in PageMaker – Dialog box open Publication – Text Blocks – Handling Pages – Flow of Text in Linked Text Blocks – Using Toolbox – Using Toolbar – Importing Text Pictures and Wrapping around Pictures - Character Level & Paragraph Level Formatting – Opening Multiple Publication Window – Using Story Editor – Spelling find & Change - Using Styles – Using Document – Master Pages

Unit - V

Flash: Introduction – Explore User Interface – Work with workspace – save, open, close, flash Document – Drawing Modes - Working with drawing tools – Working with Colors – Adding Filters – Working with objects & text – Creating Animation.

Text Books:

“DTP Course” by Shirish Chavan

Unit – I : Chapter 1.1,1.6-1.8,1.14-1.22,1.28,1.29,1.33

Unit – II : Chapter 2,3.1,3.1-3.5,3.7,3.8,3.13

Unit – III : Chapter 4,5

Unit – IV : Chapter 6,7.1-7.7,7.13,7.14

“Flash CS5 in simple steps” by Kogent Learning Solutions Inc.

SELF STUDY
SCRIPTING LANGUAGE

Semester: IV

Subject Code:

Hours/Week:

Credit: 3

UNIT I

Introduction – Need of scripting language – overview of HTML document – Head Section – Prologue – Link – Meta – Script – Body Section – Headres – Paragraphs – Text Formatting – Tables – Frames – HTML Forms

UNIT II

VB SCRIPT: Introduction – Embedding VB script code in an HTML document – Comments – Variables – operators – Procedures – Conditional Statements – Looping – Objects and VB script – Cookies – Cookie variable – creating a cookie – A cookie with multiple values – Reading cookie value

UNIT III

JAVA SCRIPT: Introduction – Language Elements – Identifiers – Expressions – Javascript keywords – Operators – Statements – Functions – Objects of Javascript – Window object – Document object – Forms object – select object – Other objects – Arrays

UNIT IV

ACTIVE SERVER PAGE(ASP): Introduction - Advantages – ASP script – Variables and Constructs – ASP Cookies –Retrieving a cookie value – cookie with keys – ASP objects – Response object – Request object – Application object –Server object – Session object – Asp Error object

UNIT V

JAVA SERVER PAGE(JSP) : Introduction – Advantages of JSP – Components of JSP – Directives – JSP Declaratives – Scriplets – Expressions – Standard Action – Custom Tags – JSP Session – Cookies

Text Book:

“WEB TECHNOLOGY” N.P. Gopalan , J.Akilandeswari

UNIT I – Chapter 1, UNIT II – Chapter 4, UNIT III – Chapter 6, UNIT IV – Chapter 5

UNIT V – Chapter 1

SOFTWARE ENGINEERING

Semester: V

Subject Code:

Hours/Week:4

Credit: 3

UNIT I

Introduction - Size factors - Quality & Productivity Factors - Managerial Issues- Planning a Software Project - Defining the problem - Developing a solution strategy - Planning the development process - Planning an organizational structure - Other planning Activities.

UNIT II

Software Cost estimation-Software cost factors-Software cost estimation Techniques- Staffing level Estimation-Estimating Software Maintenance costs-Software requirements specification-Formal Specification Techniques Languages & Processor for required Specification.

UNIT III

Software design-Introduction-Fundamentals-Modules& Modularization criteria-Design notations-Design techniques-Detailed Design Considerable-Real time & Distributed System design-Test plans-Milestones, Walkthrough & Inception.

UNIT IV

Verification And Validation Techniques-Quality Assurance-Walk Through & Inceptions-Static analysis Symbolic Execution Unit Testing and debugging-System testing- Formal Verification.

UNIT V

Software Maintenance-Enhancing Maintainability during development-Managerial Aspects of software maintenance-Configuration management-Source code metrics-Other maintenance tools and techniques.

Text Books:

1."Software Engineering Concepts"-Richard Fairley ,Tata McGraw Hill-Edition 1997.

UNIT I – Chapter 1

UNIT II – Chapter 2, UNIT III – Chapter 3, UNIT IV – Chapter 4, UNIT V – Chapter 5

Reference Book:

“Software Engineering” -Pressman .R.S.,TMH II Edition 2000.

OPERATING SYSTEM

Semester: V

Subject Code:

Hours/Week:4

Credit: 3

UNIT I

History of OS-Types of OS- Process Concepts-Process Scheduling-Operations on Processes-Cooperating processes-Inter Process Communications.

UNIT II

Critical Section-Mutual Exclusion-Procedure-Consumer problem-Process Synchronization with semaphores, sleep and wake up-CPU Scheduling-Criteria-algorithms.

UNIT III

Introduction-Examples of deadlock-resource concepts-four necessary conditions for deadlock-deadlock prevention-deadlock deduction and banker's Algorithm-Deadlock deduction and recovery.

UNIT IV

Storage organization-contiguous-non-contiguous allocation-fixed partition multiprogramming-multiprogramming with variable partitions-swapping-virtual memory-paging-segmentation-page replacement algorithm-demand paging.

UNIT V

File System Structure-File System implementation-Directory implementation-allocation methods-free space management-kernel I/O subsystems-Disk structure-Disk Scheduling-Disk management.

Text Books:

- 1."Modern Operating System"-Andrew S.Tenanbeum,II Edition,Addison Wesley,2001.
- 2."Operating System Concepts"-Abraham Silberschatz and peter Galvin,V Edition, Addison Wesley,1998.

UNIT I – Chapter 1, UNIT II – Chapter 2,3, UNIT III – Chapter 5, UNIT IV – Chapter 7

UNIT V – Chapter 10

Reference Book:

- 1."Operating System"-Millan Milenkovi.C,Tata McGraw Hill Publishing Company Ltd.,1997.

COMPUTER NETWORKS

Semester: V

Subject Code:

Hours/Week:5

Credit: 3

UNIT I

Introduction to networks-Uses of computer networks-topologies –protocol-Reference models-OSI/ISO model.

UNIT II

The Physical Layer-Transmission media-Wireless Transmission-Switching Techniques

UNIT III

The Data Link Layer - Data Link layer design issues - Error Detection and correction-Elementary data link protocols-sliding window protocols-Channel Allocation Problem-Multiple access protocol-ALOHA-CDPD-GSM-CDMA.

UNIT IV

The Network Layer-Network Layer design issues-routing algorithms-Shortest path-flooding-hierarchical and broadcast - The Transport layer: The transport service-Elements of transport protocols–addressing-Establishing a connection-Releasing a connection- Multiplexing-Crash recovery.

UNIT V

The Application Layer: The Network Security-Traditional Cryptography-cryptographic principles-DNS-DNS Name Space-Electronic Mail.

TEXT BOOK :

1."Computer Networks", A.S.Tanenbaum ,V Edition,PHI Publication. Unit I-Chapter 1,Unit II-Chapter 2,Unit III-Chapter 3,4,Unit IV- Chapter-5,6,Unit V-Chapter 7.

REFERENCE BOOKS:

1."Telecommunication Network Design Algorithm"-Aaron Kershenbaum,McGraw Hill.

2."Data and Computer Communicaton"-William Stalling,PHI.

ASP.NET

Semester: V

Subject Code:

Hours/Week:5

Credit: 3

UNIT I

Introduction -.net Framework-Learning the .NET Framework-Data types- Declaring variables-scope and Accessibility-Variable operation-Object based manipulation

UNIT II

Basic about classes-Value types Conditional Structures-Loop Structures-Functions and Subroutines and reference types-Setting up ASP.NET and IIS-IIS Manager-Installing ASP.NET-Migrating from ASP.NET.

UNIT III

ASP.NET Applications-Code Behind-The Global .aspx Application file-Understanding ASP.NET Configuration

UNIT IV

Web controls-Web control classes-Auto post back and web control events- Validation controls-A simple validation example-Understanding regular expressions-Other rich controls.

UNIT V

Overview of ADO.NET- Characteristics of ADO.NET Object model- Creating a Connection-The connection string-SQL Server integrated authentication-Other connection string value-Connection string tips-Making the connection.

Text Books:

“The Complete Reference ASP.NET” – Matthew MacDonald.

Unit I- Chapter 1, 2, Unit II-Chapter 3,4,Unit III-Chapter 5, Unit IV Chapter 7,9, Unit V-Chapter 12,13.

ASP.NET LAB

Semester: V

Subject Code:

Hours/Week:2

Credit: 2

1. Write a .aspx program to display the welcome message.
2. Write a .aspx program to get the name and designation of an employee from the user and display the name and designation entered by the user.
3. Write a .aspx program to perform arithmetic operation.
4. Write a .aspx program to display current date and time.
5. Write a .aspx program to calculate simple interest.
6. write a .aspx program to calculate compound interest.
7. Write a .aspx web form application of ASP.net that prompts users to select the material and enter the quantity they need. The file should give the unit price of the item and the total amount of purchase. The file should display date and time using an application variable declared and initialized in the global.
8. Write a .aspx program to create electricity bill.
9. Write a .aspx program to maintain a book details.
10. Write a .aspx file that prompts users to enter the correct secret code to enable access to a restricted zone.
11. Write a .aspx file that caches the dynamic output for 120 seconds and reuse cached copy for request that have the same query string values as the cached copy.
12. Create a web service using C#. Write two web methods-one for listing the car brands and another for searching and displaying price list.
13. Write a web application using .Net that uses the web services, it should provide a dropdown list box to populate the car brands and a data grid to display the price list.
14. Write a .Net program to connect database using wizard.
15. Write a .Net program to connect database without using wizard.
16. Write a .Net program to generate a report.

MULTIMEDIA LAB

Semester: V

Subject Code:

Hours/Week:2

Credit: 2

1. Flash Fade In and Fade Out Effect
2. Creating a Simple Animation in Flash CS5
3. Create an Animated Car Banner using Flash CS5
4. Check board Transition Effect in Flash
5. Bouncing Effect in Flash
6. Gorgeous Page Roll Image Transition Effect in flash
7. Creating a Rotating 3D Planet in Flash
8. Traffic light Effect in Flash
9. Wave Effect in Flash
10. Create a simple website using DW
11. Create a Employee Registration form using DW
12. Create a simple shopping cart website using DW
13. Create a college website using DW
14. Create a social network website using DW
15. Create a Email Registration form using DW

ADVANCED JAVA LAB

Semester: V

Subject Code:

Hours/Week:2

Credit: 2

1. Print a Message using JSP
2. String Palindrome using JSP
3. Fibonacci Series using JSP
4. Drop a table using JSP
5. Comparison using Servlet
6. Simple Banking System Servlet
7. Online Polling system Servlet
8. To set session and cookies using JSP
9. Simple Gmail Registration using JSP
10. String store Employee Details using with JDBC Connectivity
11. To store Student Details using with ODBC Connectivity
12. Print Student Details using Servlet
13. Content Management System using Servlet
14. Simple Chatting System Using RMI

ELECTIVE – II

1. MULTIMEDIA

Semester: V

Subject Code:

Hours/Week:4

Credit: 2

UNIT I

Objectives - History of multimedia - Resources for multimedia developers -Types of products –Multimedia Architecture-Software Library - Drivers.

UNIT II

Elements of text - Text data files - Using text in multimedia application - Hypertext- Elements of graphics - images and color - graphics files and application formats - using graphics in applications.

UNIT III

Characteristics of sound and digital audio-Digital audio systems-MIDI-Audio file formats-using audio in multimedia applications -background as video-characteristics of digital video- video capture and playback systems-computer animation.

UNIT IV

Building blocks-Classes of products-Content organizational strategies- multimedia tool selection-tool features-categories of authoring tools-selecting the right authoring paradigm.

UNIT V

Internet - HTML and Web authoring- Multimedia considerations for internet - design considerations for web pages.

Text Books:

1. David Hillman, “Multimedia Technology and Applications”, Galgotia Publications Pvt Ltd.,1998.

UNIT I – Chapter 1,2- UNIT II – Chapter 4, UNIT III – Chapter 6

2.Tay Vaugan,”Multimedia make it work”,V Edition,Tata MCGraw Hill Publishing Company Ltd.,2001.

UNIT IV – Chapter 4, UNIT V – Chapter 5

ELECTIVE – II

2. CLIENT SERVER COMPUTING

Semester: V

Subject Code:

Hours/Week:4

Credit: 2

UNIT I

Introduction to client server computing - Main frame-centric client/server computing - downsizing and client/server computing.

UNIT II

Client/Server development tools-advantage of client/server computing-Connectivity - User productivity- reduction in network traffic-Faster delivery of system.

UNIT III

Components of Client/server applications - the client-the role of the client-client services-request for service-dynamic data exchange (DDE)-Object linking and embedding (OLE).

UNIT IV

Common Object Request broker architecture (COBRA) - Component of client/server application - role of the server - server functions - network operating system - Novell Netware - LAN Manager - IBM LAN Server.

UNIT V

Banyan VINES-PC Network file Services-Server Operating Systems: Netware, OS/2, Windows NT, Unix-System Application Architecture(SAA)

TEXT BOOK:

1. Patrick Smith and Steve Guengerich, Client/Server Computing, Prentice Hall of India, II Edition, 1997.

UNIT I – Chapter I, UNIT II – Chapter 1, UNIT III – Chapter 3, UNIT V – Chapter 4

UNIT V – Chapter 6

REFERENCE BOOK:

1. Dewire and Dawana Travis, Client Server Computing, McGraw Hill, 1993.

SELF STUDY
ENTERPRISE RESOURCE PLANNING

Semester: V

Subject Code:

Hours/Week:

Credit: 3

UNIT I

Introduction to ERP – Common ERP myths – History of ERP – Evolution – Growth of ERP – Advantages of ERP – Expectations in ERP – Role of CIO – ERP packages – Future ERP packages

UNIT II

Basic ERP concepts – Importance of ERP – Create ERP value – ERP Investments – Benefits of ERP – Other Factors - Risks of ERP – Implementation issues – Operation and maintenance issues

UNIT III

ERP technology – Business Process Reengineering – Data warehousing – Data mining – Online analytical processing(OLAP) – Product life cycle management(PLM) – Supply chain management(SCM) – Customer relationship management(CRM)

UNIT IV

Business Intelligence – Reasons for business intelligence – Benefits – Factors – Technology – Business Intelligence and ERP – Future Business Intelligence - Techniques

UNIT V

Ecommerce and E Business – Evolution – Growth – E commerce to E business – E business –

Text Book:

“ERP demystified” Second Edition, TMH

UNIT I – Chapter 1

UNIT II – Chapter 2,3

UNIT III – Chapter 4, UNIT V – Chapter 5

VB.NET PROGRAMMING

Semester: VI

Subject Code:

Hours/Week:5

Credit: 3

UNIT-I

Introduction to .NET- Overview of .NET Framework -Common Type System , Common Language Specification-Common Intermediate Language-Just in time compiler-Virtual Execution System-.NET Framework class library-Namespace-Variable-Variable Declaration-Data types, Constants, operators, control statements-Loop statement.

UNIT-II

Arrays , Types of Arrays- Redim Statement-List box control-Combo box Control-Procedures and structure: Subroutine procedure-Function procedure functions-Return statement-Calling a Function-Call by reference- Sub procedure - Structure-Nested structure-Message box - Input box function- Menu - MDI forms - Context menu-Rich textbox.

UNIT-III

Object oriented concepts in VB.Net-Boxing and unboxing- Read only and write only properties-Adding methods to classes-classes with constructor-Inheritance-Polymorphism-Events, Delegates and Exception handling Delegates-Exception-Try-catch-Finally-End Try-Try-Catch-Multiple catch-Nested Try-Try finally.

UNIT-IV

Library functions in VB.NET: String shared method-Instance Method-Starts with and Ends with-IndexOf and Last IndexOf - Pad Left and Pad Right-Replace and Substring-Split-Uppercase, Lowercase and Trim-String Builder class-Append-Append Format-Insert-Remove-Math Function-Data Function.

UNIT-V

Data Access with ADO.NET:-Database-Relational Database-Special Features of ADO.NET-Connection-Commands-Data Reader-Data Set-Using a Data Grid-Graphics: GDI-GDI+, - GDI + Namespaces-System.Drawing.Design Namespace-System.Drawing.ImagingNamespace-System.Drawing.Printing Namespace - System.Drawing.Text Namespace.

TEXT BOOK: “VB.NET” P.RADHAGANESHAN

REFERENCE BOOK:

“THE COMPLETE REFERENCE VISUAL BASIC.NET”

JEFFREY R.SHAPIRO.

PHP

Semester: VI

Subject Code:

Hours/Week:5

Credit: 3

UNIT – I

Introducing PHP – Basic development Concepts – Creating first PHP Scripts – Using Variable and Operators – Storing Data in variable – Understanding Data types – Setting and checking variables Data types – Using Constants – Manipulating Variables with Operators.

UNIT – II

Controlling Program Flow: Writing Simple Conditional Statements - Writing More Complex Conditional Statements – Repeating Action with Loops – Working with String and Numeric Functions.

UNIT – III

Working with Arrays: Storing Data in Arrays – Processing Arrays with Loops and Iterations – Using Arrays with Forms - Working with Array Functions – Working with Dates and Times.

UNIT – IV

Using Functions and Classes: Creating User - Defined Functions - Creating Classes – Using Advanced OOP Concepts. Working with Files and Directories: Reading Files- Writing Files- Processing Directories.

UNIT –V

Working with Database and SQL : Introducing Database and SQL-Using MySQL-Adding and modifying Data - Handling Errors– Using SQLite Extension and PDO Extension. Introduction XML - Simple XML and DOM Extension.

TEXT BOOKS:

”PHP A Beginner’s Guide”, VIKRAM VASWANI, Tata McGraw-Hill

BOOKS FOR REFERENCE

1. The PHP Complete Reference – Steven Holzner– Tata McGraw - Hill Edition.
2. Spring into PHP5 – Steven Holzer, Tata McCraw Hill Edition.

PHP LAB

Semester: VI

Subject Code:

Hours/Week:3

Credit: 3

1. Create an application to display students details in a table using php.
2. Create an application to display bus route using php.
3. Display the details of employees using php.
4. Display the course table using php.
5. Create a application to list the books in the library using php.
6. Create a login page using php.
7. Create an application form for a college using php.
8. Create an application form for a school using php.
9. Create a form to apply for voter ID using php.
10. Create an application form to apply for driving license.
11. Design a form to create an email ID using php with the validation of mandatory field.
12. Design a form to reserve railway ticket with the validation of mandatory fields.
13. Design a form to reserve air ticket with the validation of mandatory fields.
14. Create an application form for Pan Card using php.
15. Create an application for bank using php.

VB.NET LAB

Semester: VI

Subject Code:

Hours/Week:3

Credit: 3

1. Write a VB.Net program to generate Students mark list.
2. Write a VB.net program to generate Telephone Bill.
3. Write a VB.net program to generate Multiplication Table.
4. Write a VB.net program to calculate Simple and Compound interest using Dropdownlist box control.
5. Write a VB.net program to calculate Employee gross pay.
6. Write a VB.net program to create a login page.
7. Write a VB.net program to EB bill.
8. Write a VB.net program to generate inventory control (store details).
9. Write a VB.net program to maintain a Hotel details.
10. Write a VB.net program to create an application form to create an ID and Password.
11. Write a VB.net program to generate a bill for a bouquet shop.
12. Write a VB.net program to generate Adam numbers.
13. Write a VB.net program to generate prime number series.
14. Write a VB.net program to generate Armstrong numbers series.
15. Write a VB.net program to create a database connection.

ELECTIVE –III

1. SOFTWARE TESTING

Semester: VI

Subject Code:

Hours/Week:5

Credit: 2

UNIT I

Software development lifecycle model: Phases of software project-Quality assurance and quality control-Testing verification and validation process models to represent different phases-life cycle models.

UNIT II

White box testing-What is white box testing-state testing-structural testing-Challenges an white box testing. Black box testing-What is black box testing

UNIT III

Integration testing: What is Integration testing-Integration testing as type of testing-Integration testing as phase of testing-Scenario Testing-Defect Bash.

UNIT IV

System and Acceptance Testing: System Testing overview-Functional versus Non-functional testing-Functional system testing-Non functional testing-Acceptance testing-Summary of testing phases.

UNIT V

Performance testing: Factors governing Performance testing-Methodology for performance testing-Tools for performance testing-Tools for performance testing-Process for performance Testing. Regression Testing: Definition-Types of Regression testing-How to do Regression testing-Best practices in Regression testing.

Text Book:

1."Software testing Principles and Practices"-Srinivasan Desikan and Gopalaswamy Ramesh,Pearson Education.

Reference Books:

- 1."Effective methods for software Testing"-William Perry, John Wiley & sons.
- 2."Software engineering Concepts"-Richard E.Fairly,McGraw Hill Edition.

ELECTIVE –III
2. E-COMMERCE

Semester: VI

Subject Code:

Hours/Week:5

Credit: 2

UNIT I

Traditional Commerce and E-Commerce-Internet and WWW-Role of WWW-Value Chains-Strategic Business and Industry Value Chains-Role of E-Commerce.

UNIT II

Packet Switched Network-TCP/IP Protocol Script-Internet Utility Programmers-SGML,HTML and XML-Web Client/Server Architecture-Internet and Extranets.

UNIT III

Web Server-Performance Evaluation-Web Server software feature sets-Web server software and tools-Web protocol-Search engines-Intelligent agents-Web Hosting.

UNIT IV

Computer Security Classification-Copy right and intelligent property-Electronic Commerce Threats-Protecting Client Computers-Electronic payment System-Electronic cash-Strategies for marketing-Sales and Promotions-Cryptography-Authentication.

UNIT V

Definition and Capabilities-Security-Web based marketing-Engines and directory registration-online advertisements-Website design issues.

TEXT BOOK :

1.Gary P Schneider Electronic Commerce Thomson learning & James T Peny Cambridge USA,2001

2.Marlyn Greenstein and Miklos v Electronic commerce McGraw-Hill,2002.

UNIT I – Chapter 1

UNIT II– Chapter 2

UNIT III – Chapter 3,4 UNIT IV – Chapter 5, UNIT V – Chapter 7

REFERENCE BOOKS:

1.Efraim Turvan J.Lee,David kug and chung,Electronic commerce Person education Asia 2001.

PROJECT

Semester: VI

Subject Code:

Hours/Week:7

Credit:7

SELF STUDY
MOBILE COMPUTING

Semester: VI

Subject Code:

Hours/Week:

Credit: 3

UNIT I

Introduction – Introduction to wireless – Frequency need for transmission – Signals – Antenna – Signal Propagation – Cellular systems – General concepts – Advantages of Cellular systems with small cell – Cellular wireless network

UNIT II

Mechanisms to Access to the medium – Space Division Multiplex Access(SDMA) – Frequency Division Multiplex Access(FDMA) – Time Division Multiplex Access(TDMA) – Global System for Mobile Communication(GSM) – GPRS – DECT

UNIT III

Wireless LAN – Advantages of wireless LAN – Wireless transmission techniques – Settings for WLAN – WLAN technologies – Bluetooth – wireless PAN – Key Features – Protocol stack

UNIT IV

Wireless ATM (WATM) – Development of WATM – WATM working group – Services – Reference Modes – Handover – Location Handover – Mobile Quality of service – Access scenario

UNIT V

Mobile IP – Goals – Packet delivery – Requirements – Wireless Markup Language(WML) – Problems in web application – WML scripts – WAP – Architecture of WAP – Protocol stack

TEXT BOOK:

1. Vinod Kumar Garg and N.K.Venkita Krishna, Enterprises Resource Planning Concepts and practices, PHI, 1998.

UNIT I – Chapter 1

UNIT II – Chapter 1,2 UNIT III – Chapter 3, UNIT IV – Chapter 3, UNIT V – Chapter 4

REFERENCE BOOK:

1. Jose Antinio Fernandez, the SAP, R/3 Hand Book

