Rajarshi Shahu Mahavidyalaya, Latur
(Autonomous)

Department of Computer Science and Information Technology
Syllabus for under graduation course (B.Sc.C.S.)

(With Effect from Academic Year:2013-14)

Name of the Programme: Bachelor of Computer Science (First Year Semester I + II)

Semester : I

Code No	Course Name	Maximum Marks		Total Marks	Credits
		Theory / Practical	Internal		
U-COE-101	Communication Skill (Part – I)	30	20	50	2
U-DIE-169	Digital Electronics	30	20	50	2
U-FCS-170	Fundamentals of Computer Science	30	20	50	2
U-DIM-171	Discrete Mathematics	30	20	50	2
U-CPR-172	C-Programming	30	20	50	2
U-LAC-173	Digital Electronics	50	-	50	2
U-LAC-174	Fundamental of Computer Science	50	-	50	2
U-LAC-175	Discrete Mathematics	50	-	50	2
U-LAC-176	C-Programming	50	-	50	2

Semester : II

Code No	Course Name	Maximum Marks		Total Marks	Credits
		Theory / Practical	Internal		
U-COE-201	Communication Skill (Part – II)	30	20	50	2
U-FUS-269	Fundamental of Statistics	30	20	50	2
U-DSC-270	Data structure using C	30	20	50	2
U-DBM-271	Database Management System	30	20	50	2
U-WET-272	Web Technology	30	20	50	2
U-LAC-273	Fundamental of Statistics	50	-	50	2
U-LAC-274	Data structure using C	50	-	50	2
U-LAC-275	Database Management System	50	-	50	2
U-LAC-276	Web Technology	50	-	50	2

DIGITAL ELELCTRONICS

Total Teaching Hours:-60 **Marks-50**
Course Code: U-DIE-169 **Credits:02**

Course Objective

- To acquire the basic knowledge of digital logic levels and application of knowledge to understand digital electronics circuits.
- To prepare students to perform the analysis and design of various digital electronic circuits.
- To impart to you a formalism of logic and enabling you to analyse logical processes.
- To enable you to implement simple logical operations using combinational logic circuits.
- To enable you to understand common forms of number representation in digital electronic circuits and to be able to convert between different representations.
- To enable you to understand the logical operation of simple arithmetic and other MSI circuits (Medium Scale Integrated Circuits).
- To impart to you the concepts of sequential circuits enabling you to analyse sequential systems in terms of state machines.
- To enable you to implement synchronous state machines using flip-flops.

Learning Outcome

- To have a thorough understanding of the fundamental concepts and techniques used in digital

electronics.

- To understand and examine the structure of various number systems and its application in

digital design.

- The ability to understand, analyze and design various combinational and sequential circuits.
- The Ability to identify basic requirements for a design application and propose a cost effective

solution.

- The ability to identify and prevent various hazards and timing problems in a digital design.
- To develop skill to build, and troubleshoot digital circuits.

UNIT I: Introduction to Number system and codes

1.1 Logic levels and pukse waveforms

1.2 Different number systems and their conversions(decimal,binay,octal,hexadecimal)

1.3 Binary arithmetic addition,substraction,multiplication

1.4 Binary sustraction using 1's and 2's complement method, decimal substraction using 9's and 10's complement method

1.5 BCD numbers ,ASCII codes ,GRAY code

UNIT II: Boolean algebra and gate networks

2.1 Fundamental concepts of Boolean algebra

2.2Ssymbol, boolean equation, truth tables of different types of gate such as inverter or NOT gate, AND gate, OR gate, NAND gate, NOR gate, X-OR gate ,X-NOR gate

2.3 Basic laws of Boolean algebra and simplification of Boolean

2.4 Demorgans theorem 1st and 2nd

2.5 Universal property of NAND and NOR gate

2.6 Boolean expressions for gate networks for SOP and POS format

2.7 Karnaugh map for SOP and POS format with examples to find simplified Boolean equation

UNIT III: Combinational logic circuit

3.1 Half adder and FULL adder, parallel binary adders

3.2 HALF substractor and FULL substractor

3.3 Multiplexer and demultiplexer with types & examples

3.4 Encoder and decoder with types

UNIT IV:Sequential logic circuit with Microprocessor

4.1 Flip-flop-latches,edge triggered and level triggered flip flop with types SR flip flop ,D flip flop,JK flip flip and T flip-flop

4.2 Buffer registers , modes of operation of registers (SISO,SIPO,PISO,PIPO)

4.3 Asynchronous counters and types

4.4 Synchronous counters and types

4.5 Introduction to microprocessor

4.6 Basic components of a microprocessor

Reference Books

1. Floyd, Thomas L: " Digital Computer Fundamentals" , 3 rd Edition 1997.
2. Malvino, Pual Albert and Leach, Donald P: " Digital Computer Fundamentals", 3rd Edition, 1995.TMH.
3. Modern digital electronics by R.P.Jain
4. Bartee, Thomas C: " Digital Computr Fundamentals" 6 th Edition,1995.TMH

Lab assignment (Practical List)

Lab Course :-U-LAC-173 **Credits**:02

1. To perform and verify the truth tables of basic gates and derived gates.
2. To perform and verify the truth tables of EX-OR and EX-NOR gate.
3. To perform and verify LHS and RHS of Demorgan,s Theorem I & II.
4. To perform universal property of NAND gate.
5. To perform universal property of NOR gate.
6. To Implement and verify the truth table of any two Boolean equation.
7. To perform and verify the truth table of half adder.
8. To perform and verify the truth table of half Substractor.
9. To perform and verify the truth table of multiplexer.
10. To perform and verify the truth table of De-multiplexer.
11. To perform and verify the truth table of encoder
12. To perform and verify the truth table of Decoder

Student Outcomes

The student will be able to

- Tell the history and development of digital electronics.
- Identify and describe the six basic logic gates and combinational circuits in digital electronics.
- Recognize the number systems use in digital logic design and its conversion.
- Identify and describe flip-flop circuits, shift register circuits with types, counter circuit.
- Recognize the various codes such as ASCII,BCD,EBCDIC,GRAY to secure the information in communication
- Tell the basics of microprocessor with various block.

Course code:-U-FCS-170
Course Title:- Fundamentals Of Computer Science

Teaching Hours: 60 **Marks: 50**
Credit: 02

Aims

To produce programmers equipped with an understanding of

- fundamental computational concepts underlying most programming languages
- a range of problem solving techniques using computers
- the role of programming within the overall software development process
- attitudes and working practices appropriate for a professional programmer

and skills supporting

- the solution of small problems using a programming language
- the clear expression of solutions at different levels of abstraction
- independent and self-motivated study in Computing Science.

Course Objectives

On completion of the course, the student should

Knowledge - know about:

- techniques for solving problems
- basic computational concepts and elementary data structures
- the edit-compile-link-run cycle from a user point of view
- testing strategies
- the main activities of software development and their interactions, and some of the major problems of software development

Learning Outcome:-

The curriculum leading to a baccalaureate degree in Computer Science prepares students for positions as computer scientists in business, industry and government, or for graduate study in computer science. The curriculum's main objectives are to impart students with an understanding of the basics of computer science

1. Identify the parts of the computer system.
2. Adequately explain functioning of computer components.
3. Explain the process of problem solving using computer

SYLLABUS

UNIT I: Computer System & Data Representation within Computer

1. Introduction to Computer System

1.1. Introduction
1.2. Basic structure , ALU memory , CPU , I/O devices
1.3. Generations of computer
1.4. Evolution of computer
1.5. Classification of computers : Notebook computers, personal computers, workstation, micro, mini, mainframe, super computer

2. Data Representation within Computer

2.1. Bit , Byte, Word
2.2. ASCII, EBCDIC, BCD code
2.3. Introduction to number system :
2.4. Decimal , Binary, Octal , Hexadecimal

UNIT II: Input Output Devices & Memory

3. Input Output Devices

3.1. Input Devices: Keyboard, Point & Draw Devices, Data Scanning devices, Digitizer, Electronic Card Reader, Voice Recognition devices
3.2. Output Devices: Monitor, Printer, Plotter, Screen Image projector, voice response system.

4. Memory

4.1. RAM, ROM, PROM, EPROM, EEPROM
4.2. Base Memory , Extended memory, Expanded memory, cache memory
4.3. Storage devices : Tape, FDD, HDD, CD ROM

UNIT III: Computer Software & Introduction to Operating System

5. Computer Software

5.1. Definition of software
5.2. Types of software
5.3. Compilers, Interpreters, Assemblers, Linkers, Loaders

6. Introduction to Operating System

6.1. Introduction
6.2. Main function of operating system
6.3. Files and directories
6.4. Types of OS

UNIT IV: Study of Operating systems

7. **Study of Operating systems**
7.1. Introduction to DOS
7.2. File and directory structure
7.3. Introduction to WINDOWS
7.4. Introduction to LINUX
7.5. Comparative study of operating systems

Reference Books:
1. Fundamentals of computer science-P.K.SINHA.
2 Fundamentals of computer science-V RAJARAMAN.

U-LAC-174

Practical Total Marks: 50 **CREDIT: [PR-2]**

Praposed Practical List:

1)Study of BOOTING Procedure of O.S.

2)Study of classifiction of computer.

3)Study of windows O.S.

i)Desktop ii)Icon iii)Taskbar

4)Study of Input and Output Devices.

5)Study of creating File and Folder.

6)Study of moving,copingfile,and folder from one loction to another.

7)Study of MS-DOS Internal Commands

8) Study of MS-DOS Enternal Commands

9)Study of File related commands

10) Study of Directory related Commands.

11)Introduction of MS-Word

12)Perpare time-table in MS-Word

13)letter writing in MS-word.

14)Introduction of MS-Excel

15) Introduction of MS-Powerpoint

Course Code: U-DIM-171
DISCRETE MATHEMATICS

Total Teaching Hours: 50 **Total Marks: 50**
Credit: 2

Course Objectives
To extend student's mathematical maturity and ability to deal with abstraction and to introduce most of the basic terminologies used in computer science courses and application of ideas to solve practical problems. To provide fundamental ideas on graph theory required for the study of Computer Science.

Learning Outcome
- At the end of the course, students would
- Have knowledge of the concepts needed to test the logic of a program.
- Understand basic notions of Graph Theory
- Knowing Fundamental Theorems in Graph Theory
- Study of algorithmic Graph Theory
- Have an understanding in identifying patterns on many levels.
- Be aware of a class of functions which transform a finite set into another finite set which relates to input output functions in computer science.

SYLLABUS

UNIT I:
1. **SETS, RELATIONS AND FUNCTIONS**
   - 1.1. Definition and types of sets
   - 1.2. Equal sets, subsets, universal sets, Venn diagram.
   - 1.3. Set operations
   - 1.4. Properties of set union and intersections
   - 1.5. Cartesian product
   - 1.6. Relation , types of relation
   - 1.7. Function, domain, range, Types of function

UNIT II:
2. **MATHEMATICAL LOGIC**
   - 2.1. Propositions
   - 2.2. Truth values and truth table
   - 2.3. Logical connectives and compound statements
   - 2.4. Statement pattern and logical equivalence
   - 2.5. Tautology, contradiction, contingency

UNIT III:
3. **MATRICES AND DETERMINANTS**
   - 3.1. Definition of Determinant

3.2. Definition and types of matrices
3.3. Equality of Matrices and transpose of matrices
3.4. Algebra of matrices : addition, subtraction of matrices, scalar
3.5. Multiplication of matrix ·
3.6. Adjoint of matrices
3.7. Inverse of matrices

UNIT IV:

4. GRAPH THEORY

4.1. Definition and types of graphs
4.2. Incidences and degree of vertices
4.3. Isomorphism of graphs
4.4. Connected and disconnected graphs
4.5. Walks, paths and circuits
4.6. Directed graph
4.7. Tree
4.8. Centre of Tree
4.9. Binary Tree
4.10. Spanning tree
4.11. Cut sets and Cut vertices – Fundamental circuits and cut sets
4.12. Edge Connectivity - Vertex connectivity
4.13. Hamiltonian Paths & Graphs
4.14. operations on graphs

REFERENCE BOOKS:

1. Elements of Discreet Mathematics by C.L. Liu
2. Discreet Mathematics by Olympia nicodemi
3. Mathematical Structures for Computer Science by Alon Doerr and k. Levasieur
4. A first step in graph theory by raghunathan, Nimkar & Solapurkar
5. Graphs theory with applications to computer science by Narsing Deo
6. Basic Mathematics by Mittal and Agarwal
7. Tremblay and Manohar : "Discrete Mathematical Structures with Application to Computer Science" , McGraw Hill Book Company..

Proposed Practical List

1. Set and types of sets
2. Relation and types of relations
3. Function and types of functions.
4. Logical connectives and truth tables
5. Creating matrix
6. Types of matrices and algebra of matrices
7. Inverse and adjoint matrix
8. Graph theory
9. Types of graph theory
10. Tree

Course Code:- U-CPR-172

Course Title:- 'C' Programming

Total Teaching Hours: 60 **Total Marks: 50**

Learning Objective:

- To gain experience about structured programming
- To help students to understand the implementation of C language
- To understand various features in C
- To teach basic principles of programming
- To develop skills for writing programs using 'C'

Course Outcome :

- Design an algorithmic solution for a given problem
- Write a maintainable C program for a given algorithm.
- Trace the given C program manually.
- Write C program for simple applications of real life using structures and files
- Solve the given problem using the syntactical structures of C language
- Develop , execute and document computerized solution for various problems using the features of C language
- To read and write C program that uses pointers, structures and files
- Student should be able to write a program in c language for the concept of pointer as well as structure ,union and file operations and bitwise operations.
- The student also should be able to interact with hardware through the programs.And should perform the perform the basic programs in C language.

DETAIL SYLLABUS

UNIT- I: Introduction and Overview.

CHAPTER 1. Introduction to 'C' LAnguage

1.1. Algorithm and flowchart
1.2. Introduction to C Programming language
1.3. Introduction to C
1.4. Structure of C program

CHAPTER 2. Overview of 'C'

2.1. Character set, C Tokens
2.2. Keywords
2.3. Identifiers

2.4. Variables
2.5. Constants
2.6. Data Types
2.7. Operators
2.8. Console based I/O and related built-in I/O functions: printf( ),scanf( ), getch()
2.9 Command line argument

UNIT- II: Control Structures , Arrays, Pointers

CHAPTER 3. Control Structures

3.1. Decision making structures: If, If-else, Nested If –else, Switch.
3.2. Loop Control structures: While, Do-while,for, Nested for loop
3.3. Other statements: break, continue, goto, exit

CHAPTER 4. Arrays and Pointers

4.1 Introduction to array
4.2. Arrays: One Dimensional , Two Dimensional, Multidimensional arrays
4.3 Introduction to pointers
4.4 Accessing the Address of' a variable
4.5 Declaring and initializing pointers
4.6 Accessing a variable through its pointers
4.7 pointer to pointer

UNIT- III: Functions

.**CHAPTER 5. Introduction to Function**

5.1. Introduction
5.2. Function Types
5.3. Category of functions
5.3.1 No Arguments and no return values
5.3.2 Arguments but no return values
5.3.3 Arguments with return values
5.4 Call by value, call by reference
5.7. Recursion.

CHAPTER 6. String and Math Functions

6.1 String manipulation function
6.2 strlen(), strcpy(),strcat(),strcmp(),strlwr(),strupr().
6.3 Math Function.

UNIT- IV: Structure, Union and File Management

7. **structure and union**

7.1. Introduction,Structure definition
7.2. Structure initialization
7.3. Arrays of structures
7.4. Structures within structures
7.5. Unions

8. **File management in C**
   8.1. Defining and opening a file
   8.2. closing file
   8.3. I/O operations on files
   8.4. Random access to files
   8.5. The Preprocessor.

REFERENCE BOOKS:

1. Let us C-Yashwant Kanetkar.
2. Programming in C- Balguruswamy
3. The C programming Lang., Pearson Ecl – Dennis Ritchie
4. Structured programming approach using C- Forouzah &Ceilberg Thomson learning publication.
5. Pointers in C – Yashwant Kanetkar
6. Byron Gottfried, - "Programming with C" (Schaum's Outline Series) – Tata McGrawHill Publishing Company - 1998

Proposed Practical List:

1. Write a Structure of C Program.
2. Write a program to define console based input output functions.
3. Program to define arithmetic operators.
4. Write a program to define control and branching statements.
5. Write a program on Switch Case statement.
6. Write a program to define looping statements.
7. Write a program to define go-to , break and continue statement.
8. Write a program to accept n numbers and arrange them in ascending order using array.
9. Write a program to use of pointers.
10. Write a program to use of functions.
11. Write a program on String functions.
12. Write a program using math functions.
13. Write a program using Structure and Union.
14. Write a program on fprintf() and fscanf() function.
15. Write a program on fopen() and fclose().

Course Code: U-FUS-269
Course Title:- Fundamentals Of Statistics

Total Teaching Hours: 60 **Total Marks: 50**
Credits: 2

Course Objectives

- To acquaint students with various statistical methods.
- To cultivate statistical thinking among students.
- To prepare students for future courses having quantitative components.
- Have a fundamental knowledge of the basic probability concepts.

Learning Outcome

- Understand and appreciate descriptive statistics.
- Understand the concepts of probability and random variables.

UNIT I:

1. **INDTRODUCTION AND GRAPHICAL REPRESENTION**

1.1. Definitions of Statistics.
1.2. Importance of statistics.
1.3. Advantages and Limitations.
1.4. Scope of Statistics
1.5. Collection of Data
1.6. Types of Data
1.7. Attributes and variables
1.8. Construction of Frequency, Cumulative and Relative
1.9. Frequency distributions.
1.10. Graphical representation of Frequency distribution: Histogram, Frequency Polygon, Frequency Curve and Cumulative Frequency curves (Ogive curves)
1.11. Diagrammatic representations: Simple bar, Subdivided bar, Pie diagrams.

UNIT II:

2. **MEASURES OF CENTRAL TENDENCY**

2.1. Concept of central tendency
2.2. Arithmetic Mean: Definition, Formulae and computation for ungrouped and grouped data, Merits and Demerits.
2.3. Median: Definition, Formulae and Computation for ungrouped and grouped data, Merits and Demerits.
2.4. Quartiles: Definition, Formulae and Computation for ungrouped and grouped data.
2.5. Mode: Definition, Formulae and Computation for ungrouped and grouped data, Merits and Demerits.

UNIT III:

3. **MEASURES OF DISPERSION AND PROBABILITY**

3.1. Concept of Dispersion.

3.2. Range: Definition, Formulae and Computation for ungrouped and grouped data.
3.3. Standard Deviation: Definition, Formulae and Computation for ungrouped and grouped data.
3.4. Variance: Definition, Formulae and Computation for ungrouped and grouped data.
3.5. Coefficient of variance: Definition, Formulae and Computation for ungrouped and grouped data
3.6. Probability
3.7. Permutation and combination
3.8. Sample space, Events and Types of events.
3.9. Classical definition of probability and axioms of probability.
3.10. Theorems on Probability:
3.11. 0 P(A) 1
3.12. P(A) + P(A')=1
3.13. P(A U B)= P(A)+ P(B)
3.14. P(A U B)= P(A)+P(B)-P(A B)
3.15. Problems on Probability

UNIT IV:

4. **CORRELATIONS AND TIME SERIES**
4.1. Definition of Correlation
4.2. Types of Correlation
4.3. Karl Pearson's coefficient of correlations for ungrouped data and problems
4.4. Definition and components of time series
4.5. Measures of trends
4.6. Moving average method and least square method and problems.

REFERENCE BOOKS:
1. Fundamentals of Statistics by A.M. Gun, M.K.Gupta and B. Dasgupta
2. Statistical Methods by S.P. Gupta.
3. Business Statistics by S. Shaha
4. Modern Elementary Statistics by J.E. Freund
5. Fundamentals of Statistics by S C Gupta.
6. Fundamentals of Applied Statistics by Gupta and Kapoor.

Proposed Practical List

1 Construction of histogram for given statistical data.
2 Construction of frequency polygon for given statistical data.
3 Construction of frequency curve for given statistical data.
4 Construction of ogive for given statistical data.
5 Construction of simple bar diagram for given statistical data.
6 Construction of subdivided bar diagram for given statistical data
7 Construction of pie diagram for given statistical data
8 To compute various measure of central tendency (mean, median, mode)
9. To compute various measure of dispersion (range, standard deviation, CV)
10 To compute coefficient of correlation

Course Code: U-DSC-270
Course Title:- Data Structure Using C

Total Teaching Hours: 60 **Total Marks: 50**
Credits: 2

Learning Objectives

- To teach efficient storage mechanisms of data for an easy access.
- To design and implementation of various basic and advanced data structures.
- To introduce various techniques for representation of the data in the real world.
- To develop application using data structures.
- To teach the concept of protection and management of data.
- To improve the logical ability

Course Outcomes

- Student will be able to choose appropriate data structure as applied to specified problem definition.
- Student will be able to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures.
- Students will be able to apply concepts learned in various domains like DBMS, compiler construction etc.
- Students will be able to use linear and non-linear data structures like stacks, queues , linked list etc

UNIT I:

1. **Introduction to Data structure and Arrays 10**
1.1. Definitions –Data types, Data Object, Data structure.
1.2. Implementations of Data structure.
1.3. Need of Data Structure
1.4. Types of Data Structure
1.5. Array- definition.
1.6. Types-one, multi dimensional, character string array

2. **Algorithm analysis**
2.1. Algorithm – definition, characteristics
2.2. Space complexity, time complexity
2.3. Asymptotic notation (Big O, Omega _)

UNIT II:

3. **Stack**
3.1. Definition of stack.
3.2. Operation on stack.
3.3. Declaration of stack.
3.4. Application of stack-Recursion infixes, prefixes, and postfixes expression.

4. **Queue**
4.1. Definition of queue.
4.2. Operations on queue.
4.3. Types of queue-Linear, Circular.
4.4. Applications of queue.

UNIT III:
5. **Linked List**
5.1. Concept of linked list
5.2. Implementation of Linked list
5.3. Operations on linear linked list, on on circular linked list, doubly linked list
5.4. Implementation of stack and queue using linked list.
6. **Tree**
6.1. Trees : definition, terminologies, representation, types (Only theory)
6.2. Tree Traversal- (Preorder, Inorder, Postorder) (Only theory)
6.3. Expression Trees (infix,prefix ,postfix)

UNIT IV:
7. **Searching & Sorting**
7.1. Searching : linear and binary
7.2. Sorting : bubble sort, selection sort, insertion sort,
8. **Graph**
8.1. Concept & terminologies
8.2. Graph Representation
8.3. Traversals – BFS & DFS
8.4. Applications – AOV network – topological sort
8.5. AOE network – critical path
8.6. Shortest path with implementation

REFERENCE BOOK:
1. Data Structure using C by A.M. Tanenbaum, Yecidyan lang
2. Data Structure Through C- By Dr. Sahani**.**
3. Data Structures Using C Yashwant Kanitkar – BPB Publication

Course Code: U-DBM-271
Course Title:- Database Management System

Total Teaching Hours: 60 **Total Marks: 50**
Credits: 2

Course Objectives

- To learn the fundamentals of data models and to conceptualize and depict a database system using ER diagram.
- To make a study of SQL and relational database design.
- To understand the internal storage structures using different file and indexing techniques which will help in physical DB design.
- To know the fundamental concepts of transaction processing- concurrency control techniques and recovery procedure

Learning Outcome

- Assemble the information that is needed to design a database management system for a business information problem.
- Create conceptual and logical database designs for a business information problem.
- Design a database management system that satisfies relational theory and provides users with business queries, business forms, and business reports.
- Analyze the core terms, concepts, and tools of relational database management systems.

UNIT I:

1. **Introduction to Database**
1.1. Definition of DBMS, File processing Vs DBMS
1.2. Advantages and disadvantages of DBMS
1.3. Users of DBMS
1.4. DBMS Structure
2. **Elements of DBMS**
2.1. DBMS Languages: DDL, DML, DCL
2.2. Terms: Entity, Entity set, attributes
2.3. Keys: Primary, secondary, foreign, composite

UNIT II:

3. **Data Models**
3.1. Introduction, Object based logical model,
3.2. record based logical model (RDB, NDB, HDB)
3.3. E-R model, E-R diagram
4. **Relational Algebra and Calculus**
4.1. Introduction
4.2. Relation, Schemes, Domain, Tuples
4.3. Cardinality degree
4.4. Algebraic operation

4.5. Fundamental operation: Select, product, union
4.6. Set difference : Natural join, Cartesian product, rename
4.7. Relational calculus: Tuple and domain relational calculus

UNIT III:

5. **Relational Database Design**
5.1. Normalization: INF, 2NF, 3NF, BCNF
5.2. Class diagrams and E-R tables
5.3. Functional dependency
6. **SQL**
6.1. Data types
6.2. Table Creation, Modify
6.3. Selecting, Deleting records
6.4. Simple queries
6.5. Oracle constraints

UNIT IV:

7. **Use of Operators**
7.1. Comparison operators
7.1.1. Between, In, Not In, Like, Null
7.2. Logical operators
7.2.1. AND, OR, NOT
8. **Advance in SQL**
8.1. SQL function
8.2. Joins (Self and equi)
8.3. Sub-queries
8.4. Views

Course Code: U-WET-272
Course Title:- Web Technology

Total Teaching Hours: 60 **Total Marks: 50**
Credits: 2

Objective of the Course: The course has been designed to provide the basic knowledge for design of the web page / site.

Learning Outcomes:

- A website is Published using application Server i.e. Tomcat/ IIS
- Apply Java script Code to sites.
- Develop Motion Graphic with Flash.
- Apply proper layout and interactive website design

SYLLABUS

UNIT I:

1. **Web Publishing:**
1.1. Phases of website development
1.2. Web browser
1.3. Cross browser testing
1.4. How to publish a website
1.5. Web server
1.6. WWW
1.7. URL
2. **HTML Document:**
2.1. Overview
2.2. Rules & Guidelines of HTML
2.3. Structure of HTML document
3. **The Markup Tags**
3.1. Basic HTML Tags
3.2. Physical style tags
3.3. Paragraphs
3.4. Lists
3.5. Font
3.6. HR
3.7. Heading levels
3.8. Center
3.9. Div, Span, Address

UNIT-II

4. **Linking**
4.1. Hyperlinks
4.2. Mailto anchor
5. **Inserting images**

5.1. Image file formats
5.2. <img> tag with its attributes
5.3. Images as background
5.4. Internal and External images
5.5. Image map: server side and client side image maps
5.6. Image as hyperlink
6. **Adding multimedia Elements**
6.1. Audio file formats
6.2. Adding audio in html document
6.3. Video file formats
6.4. Adding video in html document

UNIT III:

7. **Tables**
7.1. <table> tag with its attributes
7.2. Rowspan, colspan
7.3. Table element
7.4. Frames, Overview of frames
7.5. <frameset> tag and all attributes
7.6. Frame targeting
7.7. Floating frames
7.8. Forms, <form> tag with its attributes, Form controls
7.9. <input> tag with its attributes

UNIT IV:

8. **DHTML**
8.1. DOM
8.2. Moving objects in DHTML
8.3. CSS(All types)
9. **Vbscript and Javascript**
9.1. Adding script to document
9.2. Working with local and global variable
9.3. Vbscript
 Datatypes
 Operators
 Some inbuilt function
 Control statements
 Looping statements
9.4. Javascript
 Datatypes
 Operators
 Control statements
 Looping statements
10. **Introduction to ASP**
10.1. Introduction to active server pages
10.2. Installation of IIS server
10.3. Basic ASP script