Semester: I **Credits: 5**

Category: MC **No.of hrs/week: 5**

CA1505 - PROGRAMMING IN C

Objective: This course aims at explaining the basic concepts of computers and an easy understanding of C Language by the students. This helps in the development of simple C programs.

UNIT I

Basic concepts: Classification of Computers - Software Life cycle - Algorithm – Conventions used in writing Algorithms - Developing flowchart – Operating Systems – Standard Input and Output devices.

UNIT II

Fundamentals: Character set – Identifiers and keywords – Data types – typedef – Constants - Operators and Expressions - Basic Input-Output - Control structures : if ,if-else, switch case, while, do-while, for statements – Nested control structure – Break and continue statements.

UNIT III

Arrays: Definition of array – One dimensional, two dimensional arrays and multi dimensional arrays - Initialization and Processing of arrays. - Strings: Declaration and Initialization of strings –Reading and Writing Strings - Standard string functions.

UNIT IV

Functions: Introduction – Functions accepting more than one parameter – User defined and library functions – function parameters – Return values – Recursion - Pointers and functions. Storage class - Automatic, External, Static and Register variables.

UNIT V

Structure: Declaring and using structures – structure initialization - Structure within a structure – Array of Structures – Union - Bit fields - Enumerated data type – Command line Arguments.

TEXT BOOK:

1. K.R.Venugopal, S.R.Prasad, “Mastering C”, Tata McGraw Hill, 2006.

REFERENCE BOOKS:

1. Ashok N. Kamthane, Programming with ANSI and Turbo C , Seventh Impression, 2009.
2. E. Balagurusamy, Programming in Ansi C, IV Edition - Tata McGraw-Hill, New Delhi.
3. Deitel & Deitel - C How to Program, III Edition, Pearson Education, New Delhi, 2001.

Semester: I **Credits: 4**

Category: MC **No. of hrs/week: 4**

CA1506 - PROGRAMMING IN C - LAB

Simple applications in C are to be developed using the following:

1. Simple DOS Commands
2. Batch files
3. Arithmetic Expressions
4. Formatted Input/Output
5. Library functions (Mathematical, String)
6. Different types of Operators
7. Decision Making
8. Looping statements.
9. Enumerated data type.
10. Arrays (1-D, 2-D)
11. Strings
12. User Defined Functions
13. Structures

Semester: II **Credits: 4**

Category: MC **No. of Hours/Week: 3**

CA2503 - WEB DESIGNING

UNIT I

Introduction to HTML: Internet Basics - Formatting text in HTML- Lists- Adding Graphics to HTML- Internal and External Linking in HTML- Frames and framesets - Creating Tables.

UNIT II

HTML Forms - Cascading style Sheets: HTML cascading style sheets-Inline styles-Creating style sheets with the style elements- Building a web page.

UNIT III

JavaScript: Introduction to scripting –operators: logical-Increment and decrement operators –Control structures- Functions: Definition-scope rules-recursion-Arrays: Declaring arrays-passing arrays to functions-sorting arrays-object: Math object-string Object-Date object-Boolean object and Number object.

UNIT IV

XML-XML overview- features-HTML XML –processing instructions-Applications of XML-COMMENTS-XML names spaces-Schema- Style sheets: Cascading style sheets (css) Extensible Style Language (XSL)-Document object model (DOM)-DOM methods- SAX.

UNIT V

Flash MX: Interface fundamentals drawing in Flash –Working with Text-Time line Animation fundamentals -Applying layer types: guide layers, motion guides, and mask layers – Action Script.

TEXT BOOKS:

1. Ivan Bayross, "Web Enables Commercial Application Development Using HTML, DHTML Java Script, Perl CGI", BPB Publications, New Delhi, 3rd Edition, 2005.

2. Robert Reinhardt & Snow Dowd, "Macromedia Flash MX Bible", Wiley Publishing inc. 2002.

3. H.M Deitel, T.R. Nieto," Internet & World Wide Web How to program", Fifth Edition, prentice Hall of India pvt. Ltd, New Delhi.

REFERENCE BOOKS:

1. Dinesh Maidasani, "Multimedia Applications and Web Designing" Firewall Media, Laxmi Publications, First Edition 2008.

2. Deitel, Nieto, Lin, Sadhu, "XML HOW TO PROGRAM" Pearson Education, 2005.

Semester: II **Credits: 3**

Category: MC **No. of Hours/Week: 3**

CA2504 -WEB DESIGNING LAB

1. Create application form using various text formats.
2. Linking documents and images.
3. Creation of hyperlinks and frames in HTML.
4. Creation of Lists in HTML.
5. Create Mark sheet preparation using table in HTML.
6. Create LOYOLA COLLEGE website using HTML tags.
7. Create style sheets with the style elements.
8. Create Calculator format using Java script.
9. Create Login format using arrays in Java Script.
10. Demonstration of Dialog boxes using Java script.
11. Create Objects using Java script.
12. Create Employee details using schemas.
13. Create our department details using CSS
14. Create Internal and External DTD which contains student information using XML.
15. Create Payroll system using XSL.
16. Working with different layers.
17. Draw an image in flash.
18. Animation – text and image.
19. Animation with different layers.
20. Adding script.
21. Working with layers and frames.

Semester :II **Credits:2**

Category:MC **No. of Hrs/Week:3**

CA2505 - Digital Logic Fundamentals

Objective: To gain substantial knowledge about the digital fundamentals and the basic architecture of computer and to understand the design concepts of registers and counters and different Instruction Formats.

UNIT I

Number systems - Conversion from one number system to another - compliments - Binary codes - Binary logic - Logic gates - Truth tables. Boolean Algebra - Axioms - Truth table simplification of Boolean function – Karnaugh map method (upto 5 Variables) - Mc-Clausky tabulation method.

UNIT II

Adders : Half Adder – Full Adder - Subtractors : Half Subtractor - full Subtractor - Code Conversion – Universal Gates -Decoders - Encoders - Multiplexer – Demultiplexer- ROM – Types of ROM.

UNIT III

PLA - Designing circuits using ROM/PLA - Sequential logic - RS, JK, D and T Flip flops – Master Slave FlipFlop- Flip Flop Excitation Tables-Registers -Shift Registers - Counters - Ripple Counters - Synchronous Counter - Design of Counters.

UNIT IV

Instruction codes - Operation codes - Stored Program Organization - Indirect Address - Effective Address - Computer Registers - Common Bus System - Computer Instructions - Instruction Formats - Timing and Control - Control Unit - Timing Signals - Instruction Cycle - Fetch and decode - Register - Reference Instructions - Memory - Reference Instructions - AND, ADD, LDA, STA, BUN, BSA, ISZ.

UNIT V

Control Flowchart - Input-Output and Interrupt - I/O Configuration - I/O Instructions - Program Interrupt - Interrupt Cycle- Design of Arithmetic Circuit - Design of Logic Circuit – Design of ALU - Status Register - Design of accumulator.

Text Books:

1. M.Morris Mano, Digital Logic and Computer Design, Pearson Education,III Edition .
2. M. Morris Mano, Computer System Architecture, Pearson Education, III Edition.

Reference Books:

1. William Stallings, Computer Organization and Architecture, Pearson Education, V edition.
2. Carl Hamacher, Computer Organization, Mc Graw Hill International, V Edition.
3. Malvino Leech, "Digital Electronics Fundamentals" ,McGraw Hill, 2006.