Andhra Pradesh State Council of Higher Education

## BCA I year I semester

### COMPUTER FUNDAMENTALS AND MS OFFICE

**Course Objectives**

The objective of the course is to introduce the concepts of computer fundamental & their applications for the efficient use of office technology in a business environment.

**Course Outcomes**

1. Demonstrate the basic technicalities of creating Word documents for office use.
2. Create and design a spreadsheet for general office
3. Demonstrate the basic technicalities of creating a PowerPoint presentation.
4. Demonstrate the practices in data & files management

**UNIT-I**

Introduction to computers, characteristics and limitations of computer, Block diagram of computer, types of computers, uses of computers, computer generations. Number systems:binary,hexaand octal numbering system

**UNIT-II**

Input and output devices: Keyboard and mouse,inputting data in other ways, Types of Software:system software,Application software,commercial,open source,domain and free ware software , Memories: primary,secondary and cache memory.windows basics: desk top,start menu,icons.

**UNIT III**

System Software, Compilers, assemblers, loaders, Operating Systems fundamentals, Introduction to Algorithms and Programming Languages

**UNIT IV**

MS Word: Getting Started Working with Microsoft Office 2007. Understanding Word Basics Editing and Formatting Text. Formatting Documents Working with Graphic Objects

**UNIT V**

Microsoft Excel: Understanding Excel Basics. Formatting and Editing the Worksheet ,Using Formulas and Functions. Working with Charts.

Microsoft PowerPoint: Understanding PowerPoint Basics. Formatting and Modifying Presentations Enhancing the Presentation

**REFERENCE BOOK**

1. Fundamentals Of Computers " by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. Microsoft Office 2007 Fundamentals, 1st Edition By Laura Story, Dawna Walls (UNIT I, UNIT II, UNIT III, UNIT IV)
3. "Computer Fundamentals and Programming in C" by REEMA THAREJA from OXFORD UNIVERSITY PRESS
4. PC SOFTWARE UNDER WINDOWS by Puneet Kumar And Sushil Bhardwaj From Kalyani Publishers

**Student Activity:**

1. Identify the parts of your computer/laptop
2. Load trail version of recent MS office suit in your system
3. Prepare your profile in MS PP using animations and sound effects

## COMPUTER FUNDAMENTALS AND MS OFFICE LAB

1. Prepare your class time table using different Text formatting's in a table.
2. Send a Call Letter for All Applicants to Inform Interview Details using Mail Merge
3. Type your mathematical problems in MS word using Mathematical Equation editor
4. Create Water Marking
5. Create Backup file
6. Create a short film with animation and sound effects
7. Create a payslip with details of employee salary
8. Calculate student grades using his internal and external marks details
9. Draw different types of charts for weather analysis of 5 successive years
10. Prepare an excel sheet for posting attendance of students in various subjects and create a formula for promoting students having 75% minimum attendance
11. Prepare an excel sheet for conducting objective entrance test having multiple choice answers.
12. Prepare an excel sheet for student details and create formulas for accessing student addresses, category etc.

***BCA I year I semester***

## PROGRAMMING USING C

**Objectives:**

1. Learn how to solve common types of computing problems.
2. Learn data types and control structures of C
3. Learn to map problems to programming features of C.
4. Learn to write good portable C programs.

**Outcomes:**

Upon successful completion of the course, a student will be able to:

1. Appreciate and understand the working of a digital computer
2. Analyze a given problem and develop an algorithm to solve the problem
3. Improve upon a solution to a problem
4. Use the 'C' language constructs in the right way
5. Design, develop and test programs written in 'C'

### UNIT I

**Introduction to Algorithms and Programming Languages**: Algorithm – Key features of Algorithms – examples of Algorithms – Flow Charts – Pseudo code – Programming Languages – Generation of Programming Languages – Structured Programming Language.

**Introduction to C:** Introduction – Structure of C Program – Writing the first C Program – File used in C Program – Compiling and Executing C Programs – Using Comments – Keywords – Identifiers – Basic Data Types in C – Variables – Constants – I/O Statements in C- Operators in C- Programming Examples – Type Conversion and Type Casting.

### UNIT II

**Decision Control and Looping Statements:** Introduction to Decision Control Statements – Conditional Branching Statements – Iterative Statements – Nested Loops – Break and Continue Statement – Goto Statement.

**Functions**: Introduction – using functions – Function declaration/ prototype – Function definition – function call – return statement – Passing parameters – Scope of variables – Storage Classes – Recursive functions – Type of recursion – Towers of Hanoi.

### UNIT III

**Arrays**: Introduction – Declaration of Arrays – Accessing elements of the Array – Storing Values in Array – Calculating the length of the Array – Operations that can be performed on Array – one dimensional array for inter-function communication – Two dimensional Arrays – Operations on Two Dimensional Arrays.

**Strings:** Introduction - String Operations – String and Character functions.

**UNIT IV**

**Pointers:** Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables – Pointer Expressions and Pointer Arithmetic – Null Pointers - Passing Arguments to Functions using Pointer – Pointer and Arrays – Passing Array to Function– Memory Allocation in C Programs – Memory Usage – Dynamic Memory Allocation – Drawbacks of Pointers

**Structure, Union, and Enumerated Data Types:** Introduction – Nested Structures – Arrays of Structures– Self referential Structures – Union– Enumerated Data Types.

**UNIT V**

**Files:** Introduction to Files – Using Files in C – Reading Data from Files – Writing Data from Files – Detecting the End-of-file – Error Handling during File Operations .

**REFERENCE BOOKS**

1. Computer Fundamentals and Programming in C by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. E Balagurusamy: ―COMPUTING FUNDAMENTALS & C PROGRAMMING‖ – Tata McGraw-Hill, Second Reprint 2008, ISBN 978-0-07-066909-3.
3. Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson Edition Publ, 2002.
4. 2. Henry Mullish & Huubert L.Cooper: The Sprit of C, Jaico Pub. House,1996.
5. Teach your C Skills-Kanithker

**Student Activity:**

1. Create time table using faculty workload, subjects etc.
2. Prepare a complete note on recursion and its types
3. Prepare a complete note types of files and file formats for different inputdata

## PROGRAMMING USING C LAB

1. Write a C program to calculate the expression: ((a*b)/c)+(a+b-c)
2. Write a C program to calculate $(a+b+c)^3$.
3. Program to convert temperature from
    a. Celsius to Fahrenheit.
    b. Fahrenheit to Celsius.
4. Write a C program to calculate the Compound Interest.
5. Program to convert Hours into seconds.
6. Write a C program to Fine Biggest of Three numbers.
7. Write a C program to read student marks in five subjects and calculate the Total, Average and Grade according to the following conditions:
    i. If average >=75 grade is ‗A'.
    ii. If average >=60 and <75 grade is ‗B'.
    iii. If average >=50 and <60 grade is ‗C'.
    iv. Otherwise grade is ‗D'.
    v. Check that marks in each subject >= 35.

8. Write a C program to find biggest of two numbers using Switch – Case.
9. Program to display number of days in given month using Switch – -Case.
10. Write a C program to check whether the given number is Prime or Not.
11. Write a program to
    i. Check whether given number is Palindrome or Not.
    ii. Find the Reverse of a given number.

12. Program to check whether a given number is
    i. Strong or Not.
    ii. Armstrong or Not.
    iii. Perfect or Not.

13. Write a C program to print Fibonacci Series.
14. Write a C Program to print Prime Numbers up to given range.

15. Write a program to print multiplication tables up to given range.
16. Write a C program to perform
    i. Matrix Multiplication.
17. Program to display Student Details using Structures.
18. Program to swap two numbers using different parameter passing techniques.
19. Write a C program to
    i. Write data into a File.
    ii. Read data from a File.

***BCA I Year I Semester***

***Photo Shop Lab***

***Create following items using different options in photo shop***

1. Visiting card
2. Cover page of a book
3. Paper add for calling tenders
4. Passport photo design
5. Pamphlet
6. Broacher designing
7. Titles designing
8. Custom shapes creation
9. Web template design
10. Black & white and color photo conversion
11. Image size modification
12. Wedding album designing
13. Background changes
14. Box package cover designing
15. Texture and patterns designing
16. Filter effects & Eraser effects