



SILVER OAK UNIVERSITY

College of Computer Application

Bachelor of Computer Application

Subject Name: Logic Development and Programming-II

Subject Code:1040233105

Semester: II

Prerequisite: Basic Knowledge of operators, c tokens, control structure and array.

Objective:

The course will create basic fundamental of Programming and built logical concept to create an advance Applications.

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Evaluation Scheme				Total Marks
L	T	P		Internal		External		
				Th	Pr	Th	Pr	
3	0	2	4	40	50	60	---	150

Content:

Unit No.	Course Contents	Teaching Hours	Weightage %
1	Functions and Recursion: Concepts of functions with various types of parameters, various types of parameter passing mechanisms, recursive functions and implementation of these concepts in 'C', macros and pre-processors	8	20
2	Pointer: Definition and Concept, Advantage of using pointer, Pointer Arithmetic, Array of Pointers, Pointers and Functions, Pointers with UDFs	4	10
3	Structures & Unions: Structures <ul style="list-style-type: none"> • Defining a structure • Accessing a structure variable • Operations on structure members • Copying and comparing variables • Arrays of structure • Arrays within Structures Unions <ul style="list-style-type: none"> • Defining Unions 	8	25

4	Dynamic Memory Allocation & Link List: <ul style="list-style-type: none"> • Dynamic Memory Allocation • Memory Allocation Function malloc() calloc() realloc() free() • Linked List • Concepts • Advantages • Types of Linked list • Operations on Singly Linked List(create, display, insert at first, insert at last, delete at first, delete at last) • Application of Link list 	10	20
5	Concept of File Management: <ul style="list-style-type: none"> • Files <ul style="list-style-type: none"> • Concepts of File Management • File functions–fopen(), fclose(), fprintf(), fscanf(), fseek(), ftell(),rewind(), putc(), getc(), putw(),getw() • Error handling functions • Preprocessors <ul style="list-style-type: none"> • Types of Preprocessors • Macro substitution directives • File inclusion directives • Compiler control directives 	10	25

Course Outcome:

Sr. No.	CO statement	Unit No
CO-1	To obtain in depth knowledge of C language.	1,2
CO-2	understand advanced features of memory management and structure	3,4
CO-3	understand advanced features of file management	5

Teaching & Learning Methodology:-

- The course includes a laboratory, where students have an opportunity to build an appreciation for the concepts being taught in lectures.
- Lectures with live practical example using Projector and Computer
- Experiments shall be performed in the laboratory related to course contents

List of Experiments/Tutorials:

Sr. No.	Practical's
1	Write a Program to understand types of functions.
2	Write a program to explain the concept of recursion.
3	Write a program using pointer and function to determine the length of string.
4	Write a program using pointer to compare two strings.
5	Write a program using pointer to concatenate two strings.
6	Write a program using pointer to copy one string to another string.
7	Write a program using pointer to read an array of integer and print element in reverse order.
8	A program to illustrate reading files contents.
9	A program to illustrate the use of fgetc().
10	A program to illustrate the use of fputc () and fputs().
11	Write a program that uses a table of integers whose size will be specified interactively at run time.
12	Write a program to store a character string in block of memory space created by malloc and then modify the same to store a large string.
13	

Major Equipment:

1. Computer System
2. Compiler for C Program
3. Projector

Books Recommended:-

1. Programming in ANSI C, Seventh edition, by Balagurusamy E, Tata McGraw-Hill Publishing Company Limited
2. Programming with C, Second edition, by Gottfried, Tata McGraw-Hill Publishing Company Limited
3. C Programming language, Second edition, by Kernighan B W and Ritchie D M Prentice Hall.
4. "Computer programming", Pearson Education, 2007 by Ashok N. Kamthane.

List of Open Source Software/learning website:

1. <https://www.coursera.org/courses?query=c%20programming>
2. <https://www.udemy.com/>
3. <https://www.tutorialspoint.com/cprogramming>
4. NPTEL Tutorials