B.Sc. ELECTRONICS SEMESTER – II

17UELDA03	DSE Allied - 2:	3 hrs./wk	3 Credits
	C – Programming		

Objectives:

To enable the students to

- 1. Apply fundamental principles of problem solving in software engineering.
- 2. Apply basic programming principles using C language.
- 3. Apply basic C program structure in software development
- 4. Understand methodology of Programming
- 5. Apply good programming Techniques to reduce the code size of program

Syllabus:

Unit 1 Introduction to computer and programming

05 Hrs

Introduction

Basic block diagram and functions of various components of computer

Concepts of Hardware and software

Types of softwares, Compiler and interpreter

Concepts of Machine level, Assembly level and high level programming, Flow charts and Algorithms

Unit 2 Fundamentals of 'C'

06 Hrs

Features of C language

structure of C Program, comments, header files, data types, constants and variables, operators, expressions, evaluation of expressions, type conversion, precedence and associativity, I/O functions

Unit 3 Control structure in 'C'

06 Hrs

Simple statements

Decision making statements

Looping statements, Nesting of control structures, break and continue, goto statement

Unit 4 Array & String

06 Hrs

Concepts of array

One and two dimensional arrays

Declaration and initialization of arrays , string , string storage , $\label{eq:built} \mbox{Built} - \mbox{in string functions}$

Unit 5 Functions and Pointers

08 Hrs

Concepts of user defined functions, prototypes, definition of function, parameters, parameter passing, calling a function, recursive function, Macros, Pre-processing

Basics of pointers, pointer to pointer, pointer and array

Unit 6 Structure 05 Hrs

Basics of structure, structure members accessing structure members nested structures, array of structures structure and functions, structures and pointers

Text Books

- 1. Programming in ANSI C by Balaguruswamy
- 2. C Programming: Test Your Skills, 1st edition by Ashok Kamthane
- 3. Programming With Ansi And Turbo C book: Ashok Kamthane

Reference Books

- 1. Programming in C Ansi standard, by Yashwant Kanetkar
- 2. Programming with C, Gottfried, McGraw-Hill.

17UELCC07	Core Practical -3	6 hrs./wk	3 Credits
	Basic Electronics Practical		

List of Experiments

- 1. To obtain input and output characteristics and calculate gain of CE amplifier circuit.
- 2. To obtain input and output characteristics and calculate gain of CB amplifier circuit
- 3. To obtain characteristic of transistor as a switch circuit.
- 4. To obtain frequency response of single stage transistor amplifier.
- 5. To obtain frequency response of 2 stage transistor amplifier.
- 6. To determine voltage and current corresponding to Q-point for Fixed bias circuit.
- 7. To obtain Icq and Vceq for DC bias ckt with voltage feedback.
- 8. To obtain Q point for Voltage divider biasing ckt
- 9. To obtain the transfer characteristics of FET.
- 10. Determine Q-point for Class A amplifier.
- 11. Determine Q-point for Class B amplifier.