CS1L2   **Required**   **Credits: 4**
Lecture: --   **Internal assessment: 25 marks**
Lab: 6 periods/week   **Semester end examination: 50 marks**

Course context and Overview: The lab course will cover basic syntax and grammar, and expose students to practical programming techniques and also will focus on more advanced concepts, such as dynamic memory allocation, concurrency and synchronization, UNIX signals and process control, library development and usage.

Prerequisites: -

Objective:

The objective of this lab is to learn the basic program constructs using C as a programming Language. Students will understand the software development methodology in a systematic way.

Learning Outcomes:

    An ability to

1). Understand the usage of identifiers, data types and operators in 'C' programs.
2). Analyze and develop 'C' code for simple mathematical and logical problems.
3). Demonstrate 'C' code for simple problems using control structures.
4). Applying the modular programming techniques with different parameter passing techniques.
5). Analyze the concepts of derived and user defined data types with simple 'C' programs.

Course Contents / Syllabus:

Exercise 1:	Introduction to UNIX Environment
Exercise 2:	C Input and Output and Data Types
Exercise 3:	Operators & Arithmetic Expressions -I
Exercise 4:	Operators & Arithmetic Expressions -I
Exercise 5:	Selection Control Statements – I
Exercise 6:	Selection Control Statements – II
Exercise 7:	Repetition and Loop Structures – I
Exercise 8:	Repetition and Loop Structures – II
Exercise 9:	Functions & Recursion – I
Exercise 10:	Functions & Recursion – II
Exercise 11:	Arrays –I
Exercise 12:	Arrays –II & Strings
Exercise 13:	Structures & Unions
Exercise 14:	Pointers
Exercise 15:	Files

Learning Resources

Text Book:
 Programming in C, Pradip Dey, Manas Ghosh, 2nd Edition, Oxford University Press