EMBEDDED SYSTEM DESIGN LAB
PCC-ECE303-P

General Course Information:

Course Credits: 2 Contact Hours: 4/week per group(L-T-P: 0-0-4) Mode: Lab Work	**Course Assessment** **(Internal: 30; External: 70)**

Sr. No.	Course Outcomes At the end of the semester, students will be able:	RBT Level
CO 1	Describe the procedure to write a program on MP Lab software.	L1
CO 2	Recognize the various modules available with the development board of PIC Microcontroller.	L2
CO 3	Apply instructions set to write assembly language programs.	L3
CO 4	Analyze real-time response of embedded systems.	H1
CO 5	Design and develop an embedded system using PIC Microcontroller.	H2

LIST OF EXPERIMENTS

1. Write an assembly language program to perform addition, subtraction, multiplication and division operation using PIC 16 Microcontroller.
2. Write an assembly language program to perform 16-bit addition and subtraction operation using PIC Microcontroller.
3. Write an assembly language program to perform the addition of a series of numbers using PIC Microcontroller.
4. Write an assembly language program to perform logical operations using PIC Microcontroller.
5. Write an assembly language program for delay calculation using PIC Microcontroller.
6. Write a program for the blinking of LED's using PIC Microcontroller.
7. Write an assembly language program to find the largest number from a given series.
8. Write an assembly language program to find the smallest number from a given series.
9. Write an assembly language program to sort a given number of series in ascending order.
10. Seven segment display interfacing with PIC Microcontroller.
11. LCD Interfacing with PIC Microcontroller.
12. DC Motor interfacing with PIC Microcontroller.
13. Stepper motor interfacing with PIC Microcontroller.
14. Servo motor interfacing with PIC Microcontroller.
15. Temperature sensor interfacing with PIC Microcontroller.
16. Accelerometer sensor interfacing with PIC Microcontroller.
17. Simple project (Any topic related to the scope of the course).

NOTE: At least twelve experiments are to be performed in the semester, out of which at least eight experiments should be performed from above list. Remaining experiments may either be performed from the above list or designed & set by the concerned institution as per the scope of the syllabus.