SEMESTER	*DEPARTMENT*	*COURSE TITLE*
Eighth	*Power Engineering*	*Microcontrollers Lab*
COURSE CODE	*HOURS:* 3	*COURSE SPECIFICATIONS*
EC808	*UNITS:* 1	*Practical Contents*

1. Introduction MPLAB and instruction set:

➢ Creating a project using MPLAB

➢ Specification and configuration of PIC16f628.

➢ Writing a simple program with basic instructions using instruction set in datasheet.

➢ Downloading the software program to PIC chip.

2. Arithmetic and Logic Operations:

➢ Writing a program to introduce the different operations in datasheet.

➢ Number system conversion, e.g. converting ASCII code to Hex Codes.

3. Delay Loops:

➢ Writing a delay on certain value.

➢ Connecting LEDs with PIC port.

➢ Flashing LEDs with no delay.

➢ Flashing LEDs with delay.

➢ Flashing 8 LEDs with delay in series.

4. 7 Segment Display:

➢ Introduction of Lookup table.

➢ Using subroutine and jump.

5. Interrupt:

➢ Introducing interrupt sources.

➢ Using interrupt applications : e.g. controlling flashing speed of a flasher

References:

1. John Morton, *The PIC Microcontroller:Your Personal Introductory Course*, 3rd edition, Newnes.
2. PIC16F628 datasheet.