SEMESTER	DEPARTMENT	COURSE TITLE
Eighth	*Telecommunications Engineering*	*Microcontrollers Lab.*
COURSE CODE	**HOURS** 3	**COURSE SPECIFICATIONS**
EC706	**UNITS** 1	*Practical Content*

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.