Course code and name	EE342-2: Microprocessor
Credits units	2 Credit units
Contact hours	4 Contact hours: 1 lecture, 1 tutorial and 2 practical
Instructor name	Dr. Ghazi Ben Hmida
Textbook	BARRY B. BREY, "THE INTEL MICROPROCESSORS, 8086/8088...80486, Pentium, and Pentium Pro Processor, Architecture, Programming, and Interfacing", by Prentice-Hall, Inc., Simon & Schuster/A Viacom Company, Upper Saddle River, New Jersey 07458.
Other supplemental materials	Microprocessor 8086: Architecture, Programming and Interfacing. By Sunil Mathur. ISBN-978-81-203-4087-9
	Specific course information
a. Course description	This course is intended to teach students the architecture and instruction set of typical 16-bit microprocessor (Intel 8086). It also deals with signal descriptions of Intel 8086 chip, Memory Organization (Segmented Memory, Generating memory address), register organization of 8086, and introduction to Maximum and Minimum mode operation and Addressing Modes. Assembly Language Programming using assembler (MDA-8086 LAB KIT) and Input-Output techniques used in microprocessor-based systems are discussed.
b. Prerequisite	EE272-2
c. Required / Elective	Required
	Course Learning Outcomes
CLO of the Lecture Activities: CLO1: Describe the history and structure of microprocessors, basic architecture, physical configuration of memory and various signals generated by the 8086 microprocessor. CLO2: Calculate Effective and Physical addresses for different addressing mode. CLO3: Analyze and perform data transfer operations, arithmetic and logic operations, Bit Manipulation, String manipulation Instructions, Processor Control Instructions and program control operations in 8086 microprocessors with applicable addressing	

modes.

CLO4: Analyze and write programs using 8086 assembly language (instructions, directives and addressing modes) to interface memory and I/O devices.

CLO of the Laboratory Activities:

CLO1: Verify theory and to improve knowledge learned in class.

CLO2: Formulate and solve problems related to theory.

CLO3: Design and safety conducts an experimental procedure.

CLO4: Independently perform accurate quantitative measurements, interpret experimental results, perform calculations on these results and draw a reasonable, accurate conclusion.

CLO5: Communicate critical analysis of scientific information through written reports.

CLO6: Be integrated inside a group of work and respect the team working.

Brief list of topics to be covered

- Basic concepts of 8086 microprocessor
- Architecture of microprocessor
- Memory Organization
- Use the assembly language programming
- Use the microprocessor in some industrial applications

Mapping Course Learning Outcomes to Student Outcomes

	Lecture Activities						
	SO1	SO2	SO3	SO4	SO5	SO6	SO7
CLO1							
CLO2							
CLO3							
CLO4							
	Laboratory Activities						
	SO1	SO2	SO3	SO4	SO5	SO6	SO7
CLO1							
CLO2							
CLO3							

CLO4							
CLO5							
CLO6							