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Department of Computer Engineering	
Microprocessors Lab (66392)	
Total Credits	**1**
major compulsory	
Prerequisites	P1 : Microprocessors (66322)

Course Contents

Introduction to the Microprocessors (Intel 80386) and its Architecture, Addressing Modes, Data Movement Instructions, Arithmetic and Logic Instructions, Program Control Instructions, Programming the Microprocessor, Interrupts. ADC, DAC, and I/O interfacing and control.

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	Demonstrate an understanding of the microprocessor architecture, its instructions and addressing modes	A	40 %
2	Develop assembly language programs for microprocessor applications such as data acquisition, DC and stepper motor control, and dealing will sensors.	K	30 %
3	Understand and demonstrate the microprocessor signals, bus cycles, timing a memory system and I/O circuit interface and how to interface them to a microprocessor.	C	30 %

Textbook and/ or Refrences

Barry B. Brey. The Intel Microprocessors, Kits User guides (from ElettronicaVeneta)

Assessment Criteria	Percent (%)
Laboratory Work	60 %
Final Exam	40 %

Course Plan

Week	Topic
1	Introduction to the microprocessor kits and its components
2	Exp1: Introduction To Basic Input Output
3	Exp2:Analog to Digital Conversion
4	Exp3: Kepad
5	Exp4: Digital to Analog Conversion
6- 7	Exp5: Strain Gage and Temperature Sensor Acquisition
8	Exp6: Ultrasonic Receiver and Transmitter
9- 10	Exp7: D.C Motor Control (Part 1 + Part2)
11	Exp7: Stepper Motor
12	Exp8: Stepper Control Positioner
13- 14	Exp9: Calculator
15	Final Exam