Hashemite University
College of Engineering
Department of Mechatronics
Microprocessor and Microcontroller 110405425
(1 Credit Hours)

Instructor

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Grading info

Experiments	**40**
Mid	20
Final	40

Class Info

Days	**Mon - Thu**
Time	02:00 – 05:00
Location	

Course

Course Number:	
Prerequisite:	Microcontroller and Microprocessor 110405424
Textbook:	PIC 18FXX2 data sheet, 2002Microchip Technology
Course Description (as in the catalog):	This course aims to provide the students with the ability to successfully use the microcontroller by building different circuitry and write the suitable code to make the system work.
Specific Outcomes of Instruction (Course Outcomes):	1.Analyze the needed task (regulation, controlling certain measure, measuring...etc). (Outcomes c) 2.Design the appropriate electrical circuit for the task. (Outcome e) 3.Write the code that guarantee the system would work and use different software's such as MPlab. (Outcome i,k) 4. Assemble the whole system (Hardware and software). (Outcomes e and c)
Important material	

References: Microchip Pic18FXX2 Data Sheet

Major Topics Covered and Schedule in Weeks:

Topic	# Weeks	# Contact hours
1. Introduction (Chapter 1)	1	6
2. Introduction to MPLab and Instruction set	2	6
3. Input /output port for PIC18f452 , Hardware design (simple circuit)Software design Peripherals such as A/D PWM Interrupt....	3,4,5,6,7,8	12
4. Mid Exam	5	1
5. Final Exam	9	1
Total	**15**	**26**

Student Outcomes (SO) Addressed by the Course:

#	*Outcome Description*	*Contribution*
(a)	an ability to apply knowledge of mathematics, science, and engineering	
(b)	an ability to design and conduct experiments, as well as to analyze and interpret data	
(c)	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	***M***
(d)	an ability to function on multidisciplinary teams	
(e)	an ability to identify, formulate, and solve engineering problems	***M***
(f)	an understanding of professional and ethical responsibility	
(g)	an ability to communicate effectively	
(h)	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	***L***
(i)	a recognition of the need for, and an ability to engage in life-long learning	
(j)	a knowledge of contemporary issues	
(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice	***M***

H=High, **M**= Medium, **L**=Low