Hashemite University
College of Engineering
Department of Mechatronics
Microprocessor and Microcontroller 110405424
(3 Credit Hours)

Instructor		**Grading info**		**Class Info**	
Name	Mohammad Ababneh	First 29/7	**20**	Days	
Email:	ababneh@hu.edu.jo	Second 11/8	**20**	Time	
Office:	D3134	Proj & Act.	**20**	Location	
Office hours:		Final	**40**		

Course

Course Number:	110405322
Prerequisite:	Digital Logic and Digital Electronics 110405322
Textbook:	Textbook: M Mazidi, R McMinlay, D Causey "PIC microcontroller and Embedded Systems using Assembly and C for PIC18", 4th Edition, Prentice Hall.
Course Description (as in the catalog):	This course aims to provide the students with the ability to successfully write assembly language programs for the microcontroller through learning the Software architecture, Software development tools, the instruction set and programming techniques
Specific Outcomes of Instruction (Course Outcomes):	The student shall be able to: 1. Understand Microcontrollers History, Features, Architecture 2. Learn how to write Assembly Language Programs 3. Use Branch, Call, and I/O Port instructions 4. Learn Arithmetic and Logic Instructions, and Programs 5. Learn PIC Programming in C
Important material	-

References:

1. Microchip Pic18EXX2
2. Brey B.B, "The Intel Microprocessors 8086/8088, 80186/80188, 80286, 80486, Pentium and Pentium Pro, Processor Architecture, Programming and Interface", 5th Edition, Prentice-Hall, Inc.
3. Miller G.H, "Microcomputer Engineering", 2nd Edition, Prentice-Hall, Inc

Major Topics Covered and Schedule in Weeks:

Topic	# Weeks	# Contact hours
1. The PIC Microcontrollers: History and Features	1	3
2. PIC Architecture & Assembly Language Programming	2,3	6
3. Branch, Call, and Time Delay Loop	4,5,6	9
4. PIC I/O Port Programming	7,8	6
5. Arithmetic, Logic Instructions, and Programs	9.10,11	9
6. Bank Switching, Table Processing, Macros, and Modules	12,13	6
7. PIC Programming in C	14,15	6
Total	**15**	**45**