



Jordan University of Science and Technology
Faculty of Computer & Information Technology
Computer Engineering Department

CPE351 Microprocessor Systems
Summer Semester 2019-2020

Course Catalog
3 Credit Hours. Microprocessor and microcontroller organization; assembly language and programming techniques, bus and memory organization, direct memory access, timing issues, interrupts, peripheral devices, serial and parallel communication, timing analysis, and interfacing to analog and digital systems.

Text Book	
Title	Microprocessor Systems Design: Hardware, Software & Interfacing
Author(s)	Alan Clement
Edition	3rd Edition
Short Name	Ref #1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	The Intel Microprocessors Architecture, Programming, and Interfacing	Barry Brey	6th Edition	

Instructor	
Name	Dr. Taisir Eldos
Office Location	C5 L2
Office Hours	Sun : 09:30 - 11:30 Mon : 14:30 - 15:30 Tue : 09:30 - 11:30 Wed : 14:30 - 15:30
Email	eldos@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun, Mon, Tue, Wed : 13:00 - 14:30 Room: منصة الكترونية
Section 2: Lecture Time: Sun, Mon, Tue, Wed : 11:30 - 13:00 Room: منصة الكترونية

Prerequisites		
Line Number	Course Name	Prerequisite Type
1712520	CPE252 Computer Organization And Design	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction to microprocessors, past, present and future technologies	
Week 2	Microprocessor systems types, structures, and components	Ch #1 From Ref #1
Weeks 3, 4	Software model, addressing modes and instruction set	Ch #2 From Ref #1
Weeks 5, 6	Machine language and Assembly language programming	Ch #3 From Ref #1
Weeks 7, 8	Hardware model, basic systems, decoding, and timing	Ch #4 From Ref #1
Weeks 9, 10	Memory, technologies, standard and direct memory access methods	Ch #5 From Ref #1
Week 11	Exception; hardware and software processing	Ch #6 From Ref #1
Weeks 12, 13, 14	Interfacing; input/output, timers/counters, and analog/digital conversion	Ch #8 & Ch #9 From Ref #1
Week 15	Microprocessor system buses	Ch #10 From Ref #1

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
An ability to identify real life problems that can be solved using microprocessor systems, and devise designs of varying complexity to solve such problems [1SO1]	40%	
An ability to carry out analysis and use metrics to deliver solutions that comply with various constraints, especially the economic and environmental constraints [1SO2]	30%	
An ability to write Assembly programs to solve various problems and use simulators to analyze and debug code [1SO6]	20%	

An ability to acquire knowledge and skills, to be aware of contemporary computing issues, and to investigate future technologies via directed self reading [1SO7]	10%	
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Relationship to Program Student Outcomes (Out of 100%)																	
A	B	C	D	E	F	G	H	I	J	K	SO1	SO2	SO3	SO4	SO5	SO6	SO7
											40	30				20	10

Evaluation	
Assessment Tool	Weight
First Exam	30%
Final Exam	50%
Quizzes	20%

Policy	
Attendance	Attendance will be recorded at the beginning of each class, and missing 20% of the classes results in automatic dismissal (No excuses). If a student misses a class, it is his sole responsibility to catchup.
Exams	No books or notes are allowed in the exams or quizzes. The exams and quizzes format may include multiple choice, but the most common is problem solving, analysis and design.
Makeups	Exam makeup requires online application within two days of the announced date, pending formal approval, makeups are arranged by the faculty for all courses in one day, typically one week after the exams period end.
Cheating	Copying assignments and cheating by any means in the exams and quizzes results in sever penalty .

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