



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

CPE353 Microprocessor Systems

First Semester 2023-2024

**Course Catalog**

3 Credit Hours. Microprocessor organization and assembly language; parallel and serial interfaces and bus architecture; memory organization and software for real time control design applications.

**Text Book**

<b>Title</b>	Microprocessor Systems Design: 68000 Hardware, Software & Interfacing
<b>Author(s)</b>	Alan Clement
<b>Edition</b>	3rd Edition
<b>Short Name</b>	Textbook
<b>Other Information</b>	

**Instructor**

<b>Name</b>	<b>Mr. Mohammed Hammouri</b>
<b>Office Location</b>	C5 L2
<b>Office Hours</b>	
<b>Email</b>	hammori@just.edu.jo

**Class Schedule & Room**

Section 1:  
Lecture Time: Sun, Tue : 11:30 - 12:30  
Room: C5021

**Tentative List of Topics Covered**

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

<b>Mapping of Course Outcomes to Program Outcomes</b>	<b>Course Outcome Weight (Out of 100%)</b>	<b>Assessment method</b>
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%	

<b>Relationship to Program Student Outcomes (Out of 100%)</b>																	
A	B	C	D	E	F	G	H	I	J	K	SO1	SO2	SO3	SO4	SO5	SO6	SO7
											40	30				20	10

<b>Evaluation</b>	
<b>Assessment Tool</b>	<b>Weight</b>
First Exam	20%
Second Exam	30%
Quizzes and Assembly Programming	10%
Final Exam	40%

<b>Policy</b>	
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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