Jordan University of Science and Technology

Faculty of Computer & Information Technology

Computer Engineering Department

CPE252 Computer Organization And Design
Summer Semester 2019-2020

Course Catalog
3 Credit Hours. Basic computer organization, memory systems including caches, computer arithmetic, processors, controllers, input/output, buses, DMA, data formats, addressing modes, instruction sets and microcode, design of a simple computer.

Text Book	
Title	Computer System Architecture,
Author(s)	M. Morris Mano
Edition	3rd Edition
Short Name	Ref #1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	Computer Organization and Design: The Hardware/Software Interface	David Patterson and John Hennessy	5th Edition	
Ref #3	Computer Organization and Architecture: Designing for Performance	William Stallings	3rd Edition	

Instructor	
Name	**Dr. Husam Suleiman**
Office Location	-
Office Hours	
Email	hasuleiman@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun, Mon, Tue, Wed : 08:30 - 10:00 Room: منصة الكترونية Section 2: Lecture Time: Sun, Mon, Tue, Wed : 10:00 - 11:30 Room: منصة الكترونية

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
1712310	CPE231 Digital Logic Design	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Week 1	Review of Digital Logic: Components, Circuits and Representations	**Ch #1,Ch #1,& Ch #3** From **Ref #1**
Weeks 1, 2	Register Transfer Language	**Ch #4** From **Ref #1**
Week 2	Microoperations	**Ch #4** From **Ref #1**
Weeks 3, 4	Instruction Codes and Instruction Sets	**Ch #5** From **Ref #1**
Weeks 5, 6	Timing and Control	**Ch #5** From **Ref #1**
Week 7	Machine and Assembly Language	**Ch #6** From **Ref #1**
Week 8	Programming Arithmetic, Logic and I/O	**Ch #6** From **Ref #1**
Week 9	Microprogrammed Control	**Ch #7** From **Ref #1**
Week 10	Central processing Unit	**Ch #8** From **Ref #1**
Week 11	Memory Organization	**Ch #12** From **Ref #1**
Week 12	Input/Output Organization	**Ch #11** From **Ref #1**

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Understand the various digital components used in the organization and design of digital computers. [1SO1]	20%	
Design an elementary basic computer [1SO1, 1SO2]	20%	
Develop basic instruction set for a simple digital computer. [1SO2, 1SO6]	20%	
Write assembly-language programs for various computer applications. [1SO1]	25%	
Understand and design Input/output and memory units [1SO2, 1SO6]	15%	

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
											55	27.50				17.50	

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

Policy	
Attendance	Excellent attendance is expected. In accordance with university regulations, students missing more than 20% of total classes are subject to failure. No excuses will be accepted. If you miss class, it is your responsibility to find out about any announcements or assignments you may have missed. Attendance will be recorded at the beginning or end of each class.
Participation	You are expected to participate in class. Participation includes asking and answering questions, raising issues, and suggesting solutions to the discussed problems.
Activity	Students are expected to work on an activity within a group of 3-4 students. The activity could be a small software project, or a case study of a healthcare provider.
Exams	All exams will be CLOSE-BOOK. The format for the exams is generally as follows: multiple-choice, and short essay questions.
Makeups	Makeup exam should not be given unless there is a valid excuse. Arrangements to take an exam at a time different than the one scheduled MUST be made prior to the scheduled exam time. In accordance with university regulations, students should bring a valid excuse authenticated through valid channels in JUST.
Workload	Average work-load student should expect to spend is 6 hours/week.
Code of Conduct	Quizzes and exams need to be done individually. Copying of another student's work, even if changes are subsequently made, is inappropriate, and such work will not be accepted. Cheating or copying from neighbor on exam is an illegal and unethical activity and standard JUST policy will be applied. All graded assignments must be your own work.

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