

University of Jordan
Computer Engineering Department
Course Outline
Computer Organization (0907335)

I. Course Description

Introduction to computer organization. Computer instruction set. Machine language. Data processing. Arithmetic unit: Carry look-ahead adders, subtractors, and shifters. Logic unit. Combinational and sequential multipliers and dividers. Floating-point number representation and arithmetic. Data path design. Control unit design. Microprogramming. Pipelining. Discussion, one hour weekly.

II. Textbooks and References

1. Patterson and Hennessy. Computer Organization & Design: The Hardware/Software Interface, 4th ed., Morgan Kaufmann, 2009.
2. Hennessy and Patterson. Computer Architecture: A Quantitative Approach, 4th ed., Morgan Kaufmann, 2007.
3. J. Hayes. Computer Architecture and Organization, 3rd ed., McGraw-Hill, 1998.
4. M. Mano. Computer System Architecture, 3rd ed., Prentice Hall, 1993.

III. Student Materials

Textbook, Class Handouts, Web Page, PC, and the Internet.

IV. College Facilities

A classroom with whiteboard and projection facilities, library, and computer laboratory.

V. Instructional Methods

1. Lectures
2. Office Discussions
3. Facebook page posts and discussions on
<http://www.facebook.com/Cpe335ComputerOrganizationFall2012>

VI. Evaluation of Outcomes

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| 1. Two Quizzes | 20% |
| a. <i>Quiz 1</i> | |
| b. <i>Quiz 2</i> | |
| 2. Midterm Exam | 30% |
| 3. Final Exam | 50% |

VII. Class Policies

- Attendance is required
- All submitted work must be yours
- Cheating will not be tolerated

VIII. Course Outline

The following table contains the list of topics to be covered in the course.

Topic	Textbook Chapters
Introduction and Performance	1.1-1.4
MIPS Instruction set	2.1-2.14
Computer Arithmetic	3.1-3.10
<i>Midterm Exam</i>	
Datapath and Control Design	4.1-4.4
Pipelining	4.5-4.9

IX. Sections and Instructors

Sec	Meeting Time	Room	Instructor	Office Hours	e-mail, Homepage
1	Sun, Tue, Thu 12:00-1:00	CPE 001	Dr. Gheith Abandah	Mon 10-11 Tue 11-12 Wed 12-1	abandah@ju.edu.jo , http://www.abandah.com/gheith