

University of Connecticut
Department of Computer Science & Engineering
CSE 220— Computer Architecture

General Information

Read this sheet carefully, and save it for future reference.

Instructor

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Course description

This course focuses on the structure and operation of modern digital computers. Topics include: fundamentals of digital logic, machine organization, control and data paths, instruction sets, addressing modes, hardwired and microprogrammed control and basic memory system organization. Additional topics may be covered, subject to student interests, class feedbacks and the schedule.

Prerequisites

Prerequisites: CSE 111 or 124C or 130 or equivalent. Those without such prior backgrounds should get the instructor's permission to register this course.

Textbook and Materials

The required textbook for this course is:

- Behrooz Parhami, 2005. *Computer Computer Architecture - From Microprocessors to Supercomputers*, Oxford University Press, Inc. (ISBN: 0-19-515455-X)

Lectures

The conceptual and theoretical course contents will be delivered primarily in the lectures, complemented by readings from the text book. You should review readings prior to attending a lecture, and review the readings again, along with any notes you took, after the lecture.

Some of the topics may seem difficult at first. It is therefore absolutely essential that you ask questions whenever something is said which you do not understand.

You are expected to attend all lectures. If you are unable to attend a lecture because of sickness or similar reasons, make sure you get the notes from a classmate. If you are out of class for an extended period of time because of sickness, notify your instructor as soon as possible, and see your instructor immediately upon your return in order to determine how to catch up. If you have missed a significant portion of the semester due to illness, it is recommended that you resign from the course.

You are strongly encouraged to attend the lectures. Attendance will be taken in class from time to time.

Labs

A lab section, taught by the teaching assistant, is associated with this course. Discussions on homework questions and programming assignments are generally conducted in the lab.

Course requirements and evaluation

The following table indicates the grade breakdown which I will use in assigning grades in the course. I reserve the right to make adjustments to the breakdown if I feel it is necessary.

40% Assignments

60% Exams

Assignments

There will be a few assignments. Some will be question & answer style homeworks, while some with programming work. The purpose of these is to give you feedback on your understanding of the material, and to give you reinforce concepts discussed in class and in the lab. Note that assignments handed in late will not be graded.

Examinations

There will be two in-class preliminary examinations (15% each), together with a comprehensive final examination (30%) at the end of the term. Midterm exams will be held on dates to be announced in lecture. The final examination will be given on a date to be specified by the University. **Do not make travel plans for times during the examination period until the final examination schedule has been posted.**

If you miss an examination because of sickness or similar reasons, visit a physician and obtain a note detailing the period during which you were medically incapable of taking the exam. Notify your instructor immediately via email or telephone (voice mail) if you are going to miss an exam *before* the exam takes place, unless medically impossible. See your instructor as soon as you return to class.

Academic Integrity

We will follow the University Policy on Academic Integrity. For more information, see the related *Student Conduct Rules*. The URL of the UConn Student Conduct Rules web page is:

<http://vm.uconn.edu/~dosa8/code2.html>

All academic work must be your own. Collaboration, usually evidenced by unjustifiable similarity in assignments, is never allowed. After an appropriate informal review, if any students are found in violation of maintaining academic integrity, sanctions will be imposed, which can be as severe as failing the course for reasons of academic dishonesty. Especially flagrant violations will be considered under formal review proceedings, which can call for harsher sanctions including expulsion from the University. If you ever have any questions or concerns regarding the policy, particularly as it relates to this course, please talk to your instructor.

Incomplete (I) grades

We will follow the University Policy on Incomplete Grades. Take the time to familiarize yourself with the contents of the related pages.

Generally, incomplete (“I”) grades are not given. However, very rarely, circumstances truly beyond the student’s control prevents him or her from completing work in the course. In such cases the instructor can give a grade of “I”. The student will be given instructions and a deadline for completing the work, usually no more than 30 days past the end of the semester. University and department policy dictate that “I” grades can be given only if the following conditions are met:

- An Incomplete will only be given for missing a small part of the course.

- An Incomplete will only be given when the student misses work due to circumstances beyond his/her control.
- An Incomplete will only be given when the student is passing the course except for the missed material.
- An Incomplete is to be made up with the original course instructor within the time specified by the appropriate University regulation (see appropriate document above), and usually within the following semester.
- An Incomplete will not be given to allow the student to informally re-take the entire course, and have that grade count as the grade of the original course.

Incompletes can not be given as a shelter from poor grades. **It is the student's responsibility to make a timely resignation from the course if he or she is doing poorly for any reason.** The last day to resign the course is October 30.

Disabilities

If you have a diagnosed disability (physical, learning, or psychological) that will make it difficult for you to carry out the course work as outlined, or that requires accommodations such as recruiting note-takers, readers, or extended time on exams or assignments, please advise the instructor during the first two weeks of the course so that we may review possible arrangements for reasonable accommodations.

Course Outline

The following is a tentative outline of the major topics we will cover in the course. These are basically the first four parts of the materials introduced in the textbook.

- Background and Motivation
- Instruction Set Architecture
- Arithmetic and Logic Unit
- Datapath and Control

Additional materials will be covered, time permitting.

WWW homepage

There is a web site for the course. Students are expected to visit the web site on a regular basis. The URL is:

http://www.cse.uconn.edu/~huang/fall06_220/index.html