Spring 2016

Syllabus

Instructor: Prof. Rick Covington

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From the catalog

222. Computer Organization (3)

Prerequisites: Grade of C or better in each: COMP 122/L, 182/L. Extension of basic addressing concepts to more advanced addressability such as base register and self-relative addressing. Comparative computer architecture focusing on such organizations as multiple register processors and stack machines. Basics of virtual memory input-output. Introduction to the concept of microprogrammable systems. Low level language translation process associated with assemblers. System functions such as relocatable loading and memory management. Application of data structure and hashing techniques to the above. Other related topics.

Textbook: Stallings, "Computer Organization and Architecture", 10th edition (required), K.N. King, "C Programming: A Modern Approach" (recommended), Kernighan and Ritchie, "The C Programming Language", 2nd edition (highly recommended).

Course Learning Objectives: posted online on course web page. Course requires projects implemented in the C language, but this is not a programming course, and C language details are given low priority on exams.

Grading: Exams: 60% (2 midterms and 1 final at 20% each), Programming Projects (in C): 20% (3-4 projects total), Occasional Short Quizzes and Homeworks: 15%, Class Participation, 5%, Plus/minus grading will be used. Extensions with late penalty will be allowed within limits for programming projects and homeworks. Makeups for exams are possible if arranged in advance with valid reason as determined by instructor, and in emergencies with no advance notice with valid reason as defined by the University. There are no makeups provided for short in-class quizzes. Regular attendance is expected, occasional absences are permitted, need for frequent absences should be explained to instructor in advance.

Academic Honesty: Penalties for academic dishonesty (for example, unauthorized communication during exams, plagiarism on projects) can include a grade of F for the exam or project. More serious infractions (for example, contracting with rent-a-coder services to complete assignments for pay) can include an F for the entire course, plus reporting to the Dean of Academic Affairs. Infractions across multiple courses can result in suspension or expulsion from the University.

Week	Date	Торіс	Notes
1	01/25-01/27	Review of COMP 122, Background on	Read Ch1-3
		Computer Architecture	
2	02/01-02/03	· ·	
3	02/08-02/10	Cache Memory	Ch 4
4	02/15-02/17		
5	02/22-02/24	Internal Memory (RAM)	Ch 5
6	02/29-03/02	External Memory (Disk)	Ch 6, midterm #1
7	03/07-03/09	Number Systems	Ch 9
8	03/14-03/16	Arithmetic	Ch 10
	03/21-03/23	Spring Recess	
9	03/28-03/30	Digital Logic	Ch 11
10	04/04-04/06	Instruction Sets	Ch 12,13
11	04/11-04/13		midterm #2
12	04/18-04/20	Processor Structure	Ch 14
13	04/25-04/27		Ch 15, 16
14	05/02-05/04	Control and Microprogramming	Ch 20, 21
15	05/09-05/11	TBD	Last class on 5/11
	05/14-05/20	Final Exam Week	Final M 5/16 3-5PM

Tentative Schedule

Note

- Exact schedule of topics including midterm dates is subject to change
- Last day of regular instruction is Fri 5/13
- Cesar Chavez holiday on Thu 3/31 (doesn't affect this class)