CS 383 Computer Organization and Programming Syllabus

The syllabus below describes a recent offering of the course, but it may not be completely up to date. For current details about this course, please contact the course coordinator. Course coordinators are listed on the course listing for undergraduate courses and graduate courses.

Text Books

Required
Irv Englander , *The Architecture of Computer Hardware, Systems Software, and Networking: An Information Technology Approach* , 4th ed., Wiley, 2009

Week-by-Week Schedule

Week	Topics Covered	Reading	Assignments
1	Computer Systems, Number Systems	Chapters 1 and 2	
2	Data Formats, Representing Integer Data	Chapters 3 and 4	Number Conversion Practice exercise
3	Floating Point Numbers, The Little Man Computer	Chapters 5 and 6	
4	Exam 1, Assembly - The Motorola 68k	Online slides; chapters 1 and 2	Exam 1
5	The CPU and Memory	Chapter 7	
6	Input/Output, Assembly - First instructions	Chapter 8, slides chapter 3	
7	Computer Peripherals, Assembly - Other Instructions	Chapter 9, slides chapter 4	Assembly Practice 1
8	Assembly - Branching	Slides chapter 5	Exam 2
9	CPU Design and Organization, Assembly - The Execution Block	Chapter 10, slides chapter 6	Assembly Branching exercises
10	Modern Computer Systems, Clusters networks and data communication	Chapters 11-13	Assembly EB practice
11	Exam 3, Operating Systems Overview	Chapter 14	Exam 3
12	User View of the OS, Internal OS (part 1)	Chapter 15-16	
13	Internal OS (part 2), Exam 4	Chapter 16	Exam 4
14	Assembly - Code Production, review	Slides chapter 7	Assembly Code Production exercises