CSc 256 Machine Structures
Fall 2016

Official syllabus: http://cs.sfsu.edu/CourseSyllabi/256Desc.pdf

Texts: CSc 256 Course reader (available on iLearn)
CSc 256 Lab manual (http://unixlab.sfsu.edu/~whsu/csc256/LABS/)
Computer Organization by Patterson and Hennessy,
5th edition (Morgan-Kaufmann)

Reference: *See MIPS Run*, by Dominic Sweetman (Morgan Kaufmann)

Instructor: William Hsu (whsu@sfsu.edu)
http://unixlab.sfsu.edu/~whsu

Office: TH 907 (tel: 338-2156)

Office hours: MTR 1400-1500, or by appointment

iLearn: Check CSc 256 website at http://ilearn.sfsu.edu

Grading: 2 quizzes (5% + 10% = 15%)
Labs, projects/assignments (19%)
2 midterms + 1 final (22% + 22% + 22% = 66%)

If your project scores are much higher than your exam scores, a penalty may be applied to your project scores.

Midterms will be held in class.
The final is on Thursday 12/15 16:15 – 18:00, in class.
No rescheduling will be allowed for travel-related reasons.

Students with disabilities:

Students with disabilities who need reasonable accommodations are encouraged to contact the instructor. The Disability Programs and Resource Center (DPRC) is available to facilitate the reasonable accommodations process. The DPRC is located in the Student Service Building and can be reached by telephone (voice/TTY 415-338-2472) or by email (dprc@sfsu.edu).

CSc 256 Tentative Calendar for Fall 2016

Note: chapter numbers refer to lecture slides, not textbook

	Date	Topic	Quizzes/exams	Assignments
1-3	R 8/25	Ch 0 introduction		
		Ch 1 Integer representations/arithmetic		Lab 1.1
		Ch 1 Int arithmetic Ch 2 System view		Lab 1.2
4-6	R 9/1	Ch 2 Assignment, arithmetic		
		Ch 2 Directives, variables, ALU, IO		
		Ch 2 if-else, for loop		Lab 2.1
7-9	R 9/8	Ch 2 while loop, logical instrs	Quiz 1 (prerequisites)	Lab 2.2, Lab 2.3 Ch 2 assignment
		Ch 2 shift/rotates, Ch 3 load/stores		
		Ch 3 pointers, arrays		
10-12	R 9/15	Ch 3 pointers, arrays		Lab 3.1, Lab 3.2 Ch 3 assignment
		Ch 4 the stack, simple functions		Lab 4.1
		Ch 4 functions, nested calls		
13-15	R 9/22	Ch 4 nested calls	Quiz 2	Lab 4.2
		Ch 4 call frames		Ch 4 assignment
		Ch 4 tracing nested calls, array args		
16-18	R 9/29	Ch 5 machine language		
		Ch 5 machine language		
		Ch 5 machine language		Ch 5 Assignment
19-21	R 10/6		Midterm 1	
		Ch 5 disassembly, Ch 6 logic 1		Lab 6.1
		Ch 6 logic 2		
22-24	R 10/13	Ch 6 logic 3		Lab 6.2 Ch 6 Assignment
		Ch 7 Simple MIPS CPU		
		Ch 7 Simple MIPS CPU		
25-27	R 10/20	Ch 7 Simple MIPS CPU		
		Ch 7 Simple MIPS CPU		
		Ch 7 Pipelined MIPS		Ch 7 Assignment
28-30	R 10/27	Ch 7 Pipelined MIPS		
		Ch 7 Performance and power		
		Ch 8 Interrupts/signals		
31-33	R 11/3		Midterm 2	

		Ch 8 Interrupts/signals		
34-36	R 11/10	Ch 9 Storage technology		
		Ch 9 Mem hierarchy		
37-39	R 11/17	Ch 9 Cache 1		
		Ch 9 Cache 2		Ch 9 Assignment
		Ch 9 Virtual memory basics		
	11/21 - 27	Thanksgiving; no class		
40-42	R 12/1	Ch 9 IO basics		
		Ch 10 FP rep/arith		
		Ch 10 FP rep/arith		
43-45	R 12/8	Ch 11 PC assembly language		
		Ch 11 PC assembly language		Ch 10/11 Assignment
		Final review		
	R 12/15		Final	

General Information and Class Policies

Class accounts

1) If you are a new student, you will need to get an SFSU personal account on the SFSU servers. For instructions, see http://www.sfsu.edu/~doit/account.htm. You will be able to receive email and access the internet on this account. All students enrolled in this course will be given access to the unixlab.sfsu.edu server. All email messages and information relating to CSc 256 will be directed to your SFSU account. All software you'll need for CSc 256 will be available on unixlab.sfsu.edu. (You may also use non-sfsu accounts for your coursework; in that case, you'll have to set up software on your own machine.)

2) You should log on to your account at least 2-3 times a week to check email, even if you are not working on a 256 project that week. I send out information related to the class periodically via email, including changes in current assignments, deadlines etc., and you are responsible for keeping up-to-date by checking your email regularly. All email to me should be directed to whsu@sfsu.edu. Use the CSc 256 General forum on iLearn for questions and discussions.

3) You should be the only person who has access to your account. Do not give out your password. Do not let a friend use your account, or use a friend's account. Either action may result in temporary suspension of your account privileges.

Attendance

4) You are responsible for all information given out in class. If you are unable to attend a regular class period, make sure you find out from a classmate about the lecture and handouts.

5) If you are unable to attend a class period when a test is scheduled, you *must* contact the instructor before the test. If you are unable to take a test for medical reasons, you must have proof from a doctor, the health center etc. Otherwise, you will get a zero on that test.

Late projects

6) All projects are due at the announced deadlines. You may turn in late projects within 48 hours of the deadline, for 75% of the credit. There will be no negotiations (except for serious and compelling reasons, and they *better* be serious and compelling reasons).

7) "The computer was down" is not considered to be a serious and compelling reason for missing the deadline. You will be given sufficient time to work on each assignment. There is no excuse for waiting till the last minute.

Cheating

8) This is taken *very seriously*. Don't do it. Please consult the departmental policy on plagiarism/cheating at http://cs.sfsu.edu/plagarism.html .

9) All projects, unless otherwise specified, are individual projects. This means that you're expected to work on them on your own, and not in collaboration with other students. You may do preliminary planning with other students in the early stages of the project, or help a friend debug her/his project. However, if the code in your projects is found to be very similar, this is considered cheating, even if you worked together to produce the code.

10) Submitting someone else's work as your own is considered cheating. Letting someone else submit your work as her/his own is also considered cheating, and will be treated equally.

11) If you wrote your code on your own, you must be able to explain its details. If you are unable to explain the details of code that you turned in, I consider this a strong indication that you did not write the code on your own; in that case, I have the option of giving you a zero on that project, and reporting the incident to the department chair.

12) Depending on the seriousness of the offense, students caught cheating could be assigned an "F" in the course, or be expelled from school.