

Syllabus: Computer Science I (20-CS-121) Summer 2008

Class: MWF 12:30 - 2:20pm in 533 Baldwin

Lab: MW 2:30 - 6:20pm in 860D Baldwin

Teacher: Ryan Flannery

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Office Hours: *TBA in class and by appointment!*

Course Website: <http://www.cs.uc.edu/~flannert/cs121/>

Prerequisites:

20-CS-150 *Introduction to Electrical and Computer Engineering and Computer Science*

20-CS-151 *Introduction to Electrical and Computer Engineering and Computer Science Lab*

Course Description: *Introduction to computer science with emphasis upon structured and object-oriented programming, algorithm design, and problem-solving. Currently, C++ is used as the computer language.*

Course Goals: *The goal of this course is to teach students modern programming methodology, basic abstractions and concepts of computer science, and to design and code clear, concise programs for relatively complicated problems using the C++ language.*

Text Book: Deitel and Deitel, C++, How to Program, Prentice Hall, 6th Ed., 2006.

Approximate Course Schedule: *This is subject to change as the class proceeds! If changes are made during class, you are responsible for knowing these changes regardless if you are there!*

Week	Topics
1	Introduction, <i>What is CS?</i> , Simple C++ Programs, Data Types & their Representations, Selection Control Structures
2	Menu-driven programs, Repetition Control Structures, <i>CS as Problem Solving</i>
3	Review, Midterm Exam, Functions, Modular Programming, <i>CS as Problem Solving</i>
4	Recursion, Arrays, Sorting, <i>CS as Problem Solving</i>
5	Pointers, Strings, Classes (just introduction), Review, Final Exam

Quizzes, Exams & Assignments: Expect the following assignments in this class...

Quizzes: There will be 5 quizzes, roughly one a week. Each will take no more than 10 minutes, and is purely to make sure you are keeping up with the reading.

Exams: There will be a midterm and a cumulative final, with reviews the class period before the test is given. Each is closed-book with no cheat-sheet and no calculator. Exams will cover mostly concepts and higher-level concepts, with some focus on the language (C++).

Lab Assignments: In each lab (twice a week), you will be given a lab assignment that must be turned in *before you leave*. Each lab assignment should take no more than 2 hours (half the lab period).¹ The lab assignments will test mostly your knowledge of the language itself, by writing relatively simple (but tricky) programs. You may drop your lowest lab score, *except for the last lab – that is mandatory!*

Homeworks: There will be 8 homework projects assigned in class, and for each *at least* one week will be given to turn in the assignment (obviously, in a 5 week class there will be overlap!). These assignments will require significantly more time than lab assignments. They will test your ability to solve increasingly complicated problems, by writing well designed and well documented programs. The last homework will be a final project, significantly more difficult than the rest.

So... expect 5 quizzes, 2 exams, 11 lab assignments, and 8 homeworks.

Attendance: Attendance is mandatory. Usually, one is allowed to miss 2 days without penalty. Since this is a $\frac{1}{2}$ -quarter class, only 1 day is allowed to be missed. Additional absences are permitted if a note that can be verified is provided.

Family vacations are NOT valid excuses for absence!

¹Although you are free to leave the lab once you have completed the assignment, there will be two graduate students present and at your complete disposal... a good time to do homework!

Grading: The class will be out of 1,000 points. The breakdown is as follows. . .

Attendance:	5%	50 points	
Quizzes:	5%	50 points	(5 quizzes, each 1% or 10 points)
Midterm:	15%	150 points	
Final:	20%	200 points	
Lab-Assignments:	20%	200 points	(10 labs, each 2% or 20 points)
Homeworks:	35%	350 points	(first 7 homeworks are 4% or 40 points each, the last will be 7% or 70 points)
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Total:	100%	1,000 points	

Grading of Programs: Each program you submit for either a homework or lab assignment will be graded by *approximately* the following (this is subject to change). . .

Style/Readability:	20%
Design:	20%
Correctness:	60%