

CS 16 – Solving Problems with Computers I

Syllabus – Fall 2016

Class Time: T Th 2:00pm – 3:15pm	Location: Buchanan 1910
Instructor: Ziad Matni	Email: zmatni@cs.ucsb.edu
Office Hours: M W 2:00pm – 3:30pm in SMSS 4409	

Catalog Description and Pre-Requisites

<https://www.cs.ucsb.edu/education/courses/courses-16>

Class Overview

This is an introductory course for students who have not taken both MATH 3A and CS 8/ENG 3 already and that you are familiar enough with introductory topics on computers and programming.

By the end of the course, students will be able to:

- **identify** correct C++ syntax and semantics and will be familiar with the common mechanisms of the C++ language
- **apply** Linux tools to create, submit, compile and run C++ programs
- **select** appropriate computational abstractions based on their knowledge of underlying computer systems
- **decompose** complex problems into more manageable parts
- **create** C++ programs that solve application-specific problems

Learning how to program requires time, perseverance, and consistent practice: exactly like practicing a musical instrument, a field sport, or cooking a gourmet meal. There's a definite *science* behind programming, but it is also about *technique* – and that requires you to “get your hands dirty” and practice, practice, and then practice some more. You are bound to make mistakes – and that's ok as long as you learn from them. We can learn a lot more from our mistakes than we do from our successes. Making mistakes means **you are learning!** Do not be afraid of trying something that you initially have *no clue* about! Remember that practicing early and often will make you a better programmer in the end. This means that you should not procrastinate and wait until the last moment to do your assignments and homework... but you knew that already, didn't you!? ;))

Class Format

This is a large lecture class that meets twice a week on Tuesdays and Thursdays and is accompanied by labs on Mondays. Attending lectures and your lab is **mandatory**.

This course has 16 homework assignments, 10 lab assignments, 2 midterms and one final exam. You will submit homework as a hardcopy in class, submit lab assignments online, and do all the exams in the same classroom. Class participation is vital and highly encouraged (and recognized too!)

The instructor and all TAs have posted weekly office hours. It is preferred that you send an email to let them know if and when you are coming to their office hours.