ECS 10: Introduction to Programming
Course Information

Staff

Instructor:

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Office Hours 12:00 – 2:00P MWF, at 1037 Academic Surge

TA:

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Office Hours: 2:10 – 4:00P T 2020 SciLab & 5:10 – 7:00P W at 75 Hutchison

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Office Hours: 2:10 – 4:00P R, at 75 Hutchison

Online Information

Website:
smartsite.ucdavis.edu
Forum:
piazza.com/ucdavis/winter2015/ecs10/home

Times and Locations

Lecture:
2:10 – 3:00P MWF, 1002 Giedt
Discussion:
A01: 1:10 – 2:00P M, 1132 Bainer
A02: 1:10 – 2:00P W, 192 Young
A03: 3:10 – 4:00P F, 1007 Giedt
A04: 4:10 – 5:00P W, 1038 Wickson
A05: 9:00 – 9:50A T, 192 Young

Prerequisites

Two years of high school algebra.

Texts

ZyBook, "UC Davis ECS 10A Winter 2015: Programming in Python 3.3", available at
http://zybooks.zyante.com
Book Code: UCDavisECS10AWinter2015

Grading

Reading Assignments (20%)
- Approximately one every week.
- **No late** assignments will be accepted.

Projects (30%)
- Approximately one every two weeks.
- **No late** assignments will be accepted.

Midterm (20%)
- This will cover the first half of the quarter.

Final (30%)
- The final will be cumulative with emphasis on the second half of the quarter.

Note: You will have one week from the return of your graded work to request a regrade. Collaboration on assignments should be limited to general discussion of topics; matters where collaboration appears to be excessive will be turned over to Judicial Affairs for resolution.

Important Dates

Midterm: (Around February 6 depending on lectures)
Final: Wednesday, March 18 at 8:00 AM

Course Overview

I. Introduction: overview of computer organization, steps in creating a computer program
II. Programming in Python
   a. Simple programs: variables, assignment statements, arithmetic expressions, input and output statements
   b. Control flow statements: if statements, while statements, for statements
   c. Functions: declaration and calls, parameters, scope of variables
   d. Data structures: lists, strings, dictionaries, lists of objects
   e. Text files: reading and writing
III. Algorithms: at least one algorithm is presented in detail and introduces students to related topics such as scalability
IV. Applications: data and programs illustrate the use of computing in the workplace and in academic research. Additional programming topics such as user interfaces, database access, Web programming, graphing, or games and computer graphics may be covered
V. Introduction to software engineering
   a. Program development: teaches students to develop programs systematically, one step at a time, and to divide programs into several functions
   b. How to use a Python debugging tool