Programming with Python  
(U20 Math 133)

Instructor Information

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Course Description

An introductory course for students with little or no programming experience. Topics include the software development process, documentation, debugging, and testing within the commonly used Python environment. At the end of the course students should be able to write and debug basic programs to display and interpret data using accepted programming conventions and styles.

Course Materials

Text

There are any number of sources for learning Python, both in book form and as online tutorials. The textbook we will use for this course is *The Practice of Programming in Python, 3rd Edition*, William Punch and Richard Enbody. The e-book version is recommended, since it is less expensive. If you prefer a paper copy, the text is available at Amazon or your favorite on-line book retailer.

Software

We will be using the Anaconda Python 3.5 installation and a optionally, a stand-alone Integrated Development Environment (IDE) (I suggest Eclipse for experts, PyCharm for everyone else). See the installation instruction for details.

Laptops

We will be coding a lot in class, so bring a laptop.

Grading

The grading scheme is as follows.

- Midterm Exam (15%)
- Final Exam (15%)
• Programming Assignments (30%)

• In-class quizzes (10%)

• Final Project (30%)

The midterm is tentatively scheduled for October 11. If this date does not work for you, let the instructor know as soon as possible so the date can be changed. The final is scheduled for December 13.

Programming assignments will be passed out two or three times during the semester.
In-class quizzes will be given at the end of each class. One in-class quiz will be dropped.
A semester project is required, and will count as 30% of the final grade.

Grading Scale

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<td>A</td>
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Final Project

A final project will be required. This project will consist of several parts:

• Topic. Topics must be approved by the instructor.

• Fact Sheet (a.k.a., One Sheet, Slick Sheet). A one page “ad,” designed to pique others’ interest, and to entice them to engage in your presentation.

• Project explanatory paper. A paper, no more than 5 pages, which explains the technical aspects (e.g., code, underlying theory) of your project.

• Code. The Python code.

• Project presentation. A 10-20 minute presentation of your results to the class. Typically a presentation consists of a slide show (PowerPoint or \textit{LaTeX} Beamer) combined with a demo/explanation of your code but use whatever format is appropriate.

Students are encouraged to collaborate on projects. Groups of up to three are allowed. However, please note that each student must contribute 10-20 minutes to the presentation. The paper will be 5 pages base + at least 3 pages for each additional student (i.e., at least 5 pages for one student, at least 8 pages for two students, and at least 11 pages for three students).

Academic Honesty

Students are bound by the University College policy on academic integrity in all aspects of this course. All references to ideas and texts other than the students’ own must be so indicated through appropriate footnotes, whether the source is a book, an online site, the professor, etc. All students are responsible for following the rules outlined in the document regarding the university academic integrity policy: http://ucollege.wustl.edu/faculty/academic_integrity.
**Student Accommodations**

Washington University is committed to providing equal opportunity for students with disabilities. The Disability Resource Center (DRC) assists students with disabilities by providing services and arranging for reasonable accommodations to ensure equal access and equal academic opportunities. Students wishing to request services or accommodations must register and provide appropriate documentation to the DRC at cornerstone.wustl.edu. The DRC serves as a resource and advisor to students with disabilities and welcomes opportunities to consult with students, families, faculty, and staff.