Programming in Python

ITP-115 (3 units)

USC Viterbi School of Engineering

Objective

This course is intended to teach the basics of programming in Python. Python's high level data structures and clear syntax make it an ideal first language, while the large number of existing libraries make it suitable to tackle almost any programming tasks.

Concepts

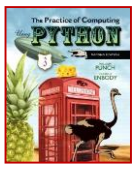
Python offers an interactive environment in which to explore procedural, functional and object oriented approaches to problem solving.

Prerequisites

none

Instructor	Rob Parke
Contacting the Instructor	parke@usc.edu 213.740.4542
Office Hours	OHE 412 – TBD
Lab Assistants	TBD
Contacting the Lab Assistants	TBD
Lecture/Lab	3 hours / week

Required Textbooks



Punch, William F. The Practice of Computing Using Python, plus MyProgrammingLab with Pearson eText (2nd edition). Addison-Wesley, 2012.
ISBN: 0132990024
Purchase: Amazon Barnes & Noble

Website

All course material will be on Blackboard (http://blackboard.usc.edu).

Grading

Participation	10%
Labs	35%
Midterm	25%
Final Project	30%

Grading Scale

A	100-93	B-	82-80	D+	69-67
A-	92-90	C+	79-77	D	66-65
B+	89-87	C	76-73	F	64 or below
B	86-83	C-	72-70		

Policies

Students are expected to:

- Attend and participate in lecture discussions and critiques
- Attend and complete weekly labs
- Manage and complete individual class projects

Software

The software needed for this course is available for free online. All homework and projects will need this software to be completed (available for Mac and Windows).

Python 3.3.2 http://www.python.org/download/releases/3.3.2/

Python 3.3.2 comes with an integrated design environment (IDE) for writing code and creating projects called IDLE. This will suffice for our class, but other IDEs are available with additional features. You may feel free to use another IDE such as Eclipse or NetBeans, especially if you are already familiar with one.

Python IDEs http://wiki.python.org/moin/IntegratedDevelopmentEnvironments

Late Work

Assignments turned in three days late will have 50% of the total points deducted from the graded score. After three days, submissions will not be accepted and you will receive a 0. It is the responsibility of the student to contact the grader when posting late projects.

ITP Labs

Before logging onto an ITP computer, students must ensure that they have emailed or saved projects created during the class or lab session. Any work not saved will be erased after restarting the computer. ITP is not responsible for any work lost.

ITP offers Open Lab use for all students enrolled in ITP classes. These open labs are held beginning the second week of classes through the last week of classes. Please contact your instructor for specific times and days for the current semester.

Incomplete and Missing Grades

Excerpts for this section have been taken from the University Grading Handbook, located at http://www.usc.edu/dept/ARR/grades/gradinghandbook/index.html. Please see the link for more details on this and any other grading concerns.

A grade of Missing Grade (MG) "should only be assigned in unique or unusual situations… for those cases in which a student does not complete work for the course before the semester ends. All missing grades must be resolved by the instructor through the Correction of Grade Process. One calendar year is allowed to resolve a MG. If an MG is not resolved [within] one year the grade is changed to [Unofficial Withdrawal] UW and will be calculated into the grade point average a zero grade points.

A grade of Incomplete (IN) "is assigned when work is no completed because of documented illness or other 'emergency' **occurring after the twelfth week** of the semester (or 12th week equivalency for any course scheduled for less than 15 weeks)."

Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. *SCampus,* the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: http://www.usc.edu/dept/publications/SCAMPUS/gov/. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/.

Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to your course instructor (or TA) as early in the semester as possible. DSP is located in STU 301 and is open from 8:30am to 5:00pm, Monday through Friday. Website and contact information for DSP http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html (213) 740-0776 (Phone), (213) 740-6948 (TDD only), (213) 740-8216 (FAX) ability@usc.edu

Emergency Preparedness/Course Continuity in a Crisis

In case of emergency, when travel to campus is difficult, if not impossible, USC executive leadership will announce a digital way for instructors to teach students in their residence halls or homes using a combination of the Blackboard LMS (Learning Management System), teleconferencing, and other technologies. Instructors should be prepared to assign students a "Plan B" project that can be completed 'at a distance.' For additional information about maintaining your classes in an emergency, please access: http://cst.usc.edu/services/emergencyprep.html

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Course Outline

Subject to change throughout the semester

Week	Topic	Reading	Lab
1	Intro	get book	-
2	Intro to Python -- types, variables, i/o	ch. 1	lab 1
3	Flow of Control -- branching, if / else, boolean, while loops, modules	ch. 2	lab 2
4	Loops, Strings, and Tuples	ch. 4, 7	lab 3
5	Strings, Tuples, Lists and Files	ch. 4, 5, 7	lab 4
6	Lists and Dictionaries	ch. 5	lab 5
7	Functions	ch. 6, 8	lab 6
8	Files	ch. 5	study
9	Midterm	-	-
10	Objects	ch. 10	lab 8
11	OOP and Inheritance	ch. 11	lab 9
12	GUI	-	lab 10
13	Exceptions	ch. 5	project
14	Python Grab Bag	notes	project
15		notes	project
16	Final Projects Due	-	-