



School of Engineering
*Information
Technology Program*

ITP 115

Programming in Python

Units: 2

Semester: Summer 2020

Section: Various

Days: Various

Times: Various

Location: OHE 540

Instructors: Nathan Greenfield

Trina Gregory

Rob Parke

Greg Pohlner

Office: Listed on Blackboard

Office Hours: Listed on Blackboard

Contact Info: Listed on Blackboard

Course Teaching Assistants: Listed on Blackboard

Office Hours: Listed on Blackboard

Contact Info: Listed on Blackboard

IT Help: Provided by Viterbi IT

Hours of Service: 8am–5pm M–F

Walk-in: DRB 205

Contact Info: (213) 740–0517

Email: engrhelp@usc.edu

Course Description

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

Learning Objectives

- Learn the syntax of the Python programming language.
- Implement a simple program by writing the code, testing the code, and debugging the program.
- Incorporating the use of sequential, selection, and repetition control structures into a program.
- Demonstrate an understanding of the design and implementation of functions and the passing of parameters to simplify the solution of large problems and to promote the concept of code reuse.
- Implement programs using sequential input and output files.
- Demonstrate an understanding of the use of the list and dictionary data structures.

Prerequisite(s): None

Format

This course will make use of Blackboard (<http://blackboard.usc.edu>) for content and assignments. Lecture slides and any supplemental course content will be posted to Blackboard for use by all students. All assignments will be posted to Blackboard and will be submitted through Blackboard. **Please familiarize yourself with Blackboard before the course begins.**

Required Books: None

Supplementary Books



Downey, Allen, Elkner, Jeff, Meyers, Chris, *Learning with Python: How to Think Like a Computer Scientist*. <https://greenteapress.com/wp/learning-with-python/>

Swaroop, C. H., *A Byte of Python*. <https://swaroop-c-h.gitbook.io/byte-of-python/>

Grading Breakdown

Item	% of Grade
Assignments (weighted proportionally)	45
Labs	10
Tests (two)	30
Final Project	15
Total	100

Grading Scale

Course final grades will be determined using the following scale

A	>= 93
A-	>= 90 and < 93
B+	>= 87 and < 90
B	>= 83 and < 87
B-	>= 80 and < 83
C+	>= 77 and < 80
C	>= 73 and < 77
C-	>= 70 and < 73
D+	>= 67 and < 70
D	>= 65 and < 66
F	< 65

General Policies

Students are expected to:

- Attend lectures and complete the in-class labs
- Complete the weekly assignments
- Complete the tests
- Complete the individual final project

Adding the Course after Week 1

Per university policy, students are allowed to add the course until the end of week 3. Any students wishing to add the course should plan on attending the course from the beginning of the semester. Upon adding the course after week 1, the student should email the instructor immediately to make a plan for completion of work and learning missed materials. Any missed work is required to be completed and submitted according to the schedule provided by the instructor. If you register for the class after assignments/labs are due, then you will have one week from when you registered for the class to submit the assignments. If you add the class during the third week of classes, then you must meet with the instructor to create a plan together on how to catch up to the rest of the class.

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). Download the latest version of Python 3.

Python 3.x <https://www.python.org/downloads/>

You will also need to download and install PyCharm, which is an integrated design environment (IDE) for writing code and creating project. You may feel free to use another IDE such as Eclipse or NetBeans, especially if you are already familiar with one.

PyCharm <http://www.jetbrains.com/pycharm/download/>

Choose the Free Community Edition

Assignments

There will be roughly one assignment due each week on Friday at 11:59 pm. The assignments will be posted on Blackboard under the "Assignments" section. Each assignment will include instructions, a due date, and a link for electronic submission. Assignments must be submitted using this link. Each assignment must be completed individually.

Late Policy

It is the student's responsibility to submit assignments on or before the due date. Assignments may be submitted within three days with a late penalty. Assignments turned in one day (24 hours) late will have 10% of the total points deducted from the graded score. Assignments turned in over one day and up to two days (> 24 hours and <= 48 hours) late will have 30% of the total points deducted from the graded score. Assignments turned in over two days and up to three days (> 48 hours and <= 72 hours) late will have 50% of the total points deducted from the graded score. After three days, submissions will not be accepted, and the score for the assignment will be a 0.

In-class Labs

There will be in-class labs throughout the semester. Of the labs that you are required to complete as announced in class, the two lowest scores will be dropped. Labs are due at 11:59 pm on the day they are assigned for the sections before 5 pm. For the sections starting after 5 pm, the labs are due at 11:59 pm on the day after they are assigned. Labs must be submitted on Blackboard. Late labs will not be accepted.

Grading

Assignments will be graded within two weeks. Students have one week to contest a grade once it has been posted on Blackboard. After this one week, the grade will not be changed. To contest a grade, create a private post on Piazza and select the grades folder. In the post, include your name, the assignment name, and your reasons. This will allow the grader, instructor, and head CTA (Course Teaching Assistant) to view your submission and make a decision.

Tests

No make-up tests (except for documented medical or family emergencies) will be offered. If you will not be able to attend a test due to an athletic game or other valid reason, then you must coordinate with the instructor before the test is given. You may arrange to take the test before you leave, with an approved university personnel during the time you are gone, or within the week the test is given. If you do not take a test, then you will receive a 0 for the test.

If you need accommodations authorized by DSP (Disability Services and Programs), notify the instructor at least two weeks before the test. This will allow time for arrangements to be made.

Final Project

The final project replaces the final exam. This comprehensive assignment will be due during Finals Week. The final project needs to be submitted by the due date. Late projects will not be accepted and will receive a 0.

ITP Computers

ITP has laptops that are available to borrow for ITP classes. Visit the ITP office in OHE 412 during the week (Monday - Friday, 8:30 am - 5 pm) to fill out a loan contract and then receive a laptop and power adapter. If all of them have been checked out, then you will be placed on the waiting list. You must return it each week. If there is no one on the waiting list, then the laptop will be renewed to you for another week. If you do not return it after a week, then you will lose the privilege and the laptop will be repossessed.

You will not be able to save your work on the ITP lab computers and the ITP laptops. Once they are restarted, all work will be deleted. Use an external USB drive or a repository like GitHub or Dropbox to save your work. ITP is not responsible for any lost work.

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. They are listed on the ITP website at <http://itp.usc.edu>.

Attendance

Attendance is not part of the grading breakdown, although attending lectures will help you learn the material and succeed in this class. If you are not able to attend lectures and be an active learner, then do not take this class. The instructor expects you to pay attention during lectures and refrain from distracting your classmates. Chatting while the instructor is talking, texting on your mobile device, and participating on social media sites during class is disrespectful to the instructor and your classmates.

Joint Educational Project (JEP)

The Joint Educational Project (JEP) is a program that allows students to teach material learned in college classes to K12 students in the local community. The JEP commitment is approximately 2 hours/week for 8 weeks. For successful completion of JEP, based on the requirements as set by JEP, you will earn 1/3 of a letter grade extra credit, meaning if you earn a B- in the class, you will receive a B. More info at <https://dornsife.usc.edu/joint-educational-project/service-learning-opportunities/>.

Academic Integrity

SCampus is USC's Student Guide to Policies and Conduct Code and can be found at <http://scampus.usc.edu>. Students will be referred to the Office of Student Judicial Affairs and Community Standards (SJACS) 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/>.

Assignments and projects in computer programming courses are *different* from those in some other types of courses. Students may NOT collaborate, work together, share code, or in any way exchange solutions for assignments and projects. Assignments may be analyzed by software that looks for similarity. Any sharing of ideas or code will be considered a violation of academic integrity (cheating); an SJACS report will be filed with the recommended penalty of an F in the course. Do not share your code with anyone else in this or a future section of the course, as allowing someone else to copy your code carries the same penalty as you copying the code yourself.

If the instructor, a grader, or a lab assistant suspects you of academic dishonesty, it has to be reported to SJACS. Do not share assignments with another person. Do not submit another person's work as your own. Do not look at other students' papers during tests. Do not leave the room during a test without permission. Do not cheat! As Trojans, we are faithful, scholarly, skillful, courageous, and ambitious.

Course Material

Do not reproduce, distribute, or post any lecture material, assignments, or tests publicly without the written consent of the instructor. Students may take notes and make copies of course materials for their own use. They may not post the course materials on sites such as CourseHero. Doing so is a copyright violation and an academic integrity violation that will be dealt with accordingly.

Communication

The preferred way to communicate with instructors and CTAs is posting on Piazza (<http://piazza.com>). All ITP 115 students, instructors, and CTAs will have access to the same class on Piazza. Information about accessing Piazza is available on Blackboard. If you have questions about assignments, labs, tests, and other aspects about this course, please post on Piazza. You are able to make public posts which all members can see and answer or private posts which are only accessible to instructors and CTAs.

Course Schedule: A Weekly Breakdown

	Topics/Daily Activities	Assignment	Due Dates
Week 1	Class Introduction Python (print, input, variables)	Assignment 0	1/15/2020
Week 2	Expressions and Operators Branching	Assignment 1	1/24/2020
Week 3	While Loops	Assignment 2	1/31/2020
Week 4	For Loops	Assignment 3	2/7/2020
Week 5	String Processing Lists part 1	Assignment 4	2/14/2020
Week 6	Lists part 2 Lists and String	Assignment 5	2/21/2020
Week 7	Review Test #1		Study
Week 8	Functions part 1	Assignment 6	3/6/2020
Week 9	Functions part 2	Assignment 7	3/13/2020
Week 10	Files (read and write)	Assignment 8	3/27/2020
Week 11	Objects part 1	Assignment 9	4/3/2020
Week 12	Objects part 2	Assignment 10	4/10/2020
Week 13	Review Test #2		Study
Week 14	Dictionaries	Final Project	Work on Final Project
Week 15	Graphical User Interfaces	Final Project	Work on Final Project
FINALS		Final Project	Final Project due on Wednesday, 5/6/2020

Statement on Academic Conduct and Support Systems

Academic Conduct

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” <https://policy.usc.edu/scampus-part-b/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Support Systems

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. <https://engemannshc.usc.edu/counseling/>

National Suicide Prevention Lifeline - 1-800-273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <http://www.suicidepreventionlifeline.org>

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <http://sarc.usc.edu/>

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. <https://equity.usc.edu/>

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://studentaffairs.usc.edu/bias-assessment-response-support/>

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations. <http://dsp.usc.edu>

Student Support and Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://studentaffairs.usc.edu/ssa/>

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. <https://diversity.usc.edu/>

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible, <http://emergency.usc.edu>

USC Department of Public Safety – 213-740-4321 (UPC) and 323-442-1000 (HSC) for 24-hour emergency assistance or to report a crime.

Provides overall safety to USC community. <http://dps.usc.edu>