USC Viterbi School of Engineering
Technology and Applied Computing

TAC 116: Accelerated Programming in Python

Units: 2

Semester: Fall 2025

Section 31817:
- **Days and Times:** 11:00-11:50am Mon, Wed
- **Location:** MHP 101

Section 31818:
- **Days and Times:** 3:00-3:50pm Mon, Wed
- **Location:** DMC 156

Section 31819:
- **Days and Times:** 02:00-02:50pm Tue, Thu
- **Location:** DMC 102

Instructors: Sinan Seymen, Ph.D.
Office: Listed on Brightspace and Piazza
Office Hours: Listed on Brightspace and Piazza
Contact Info: Listed on Brightspace and Piazza

Learning Assistants: Listed on Piazza
Office Hours: Listed on Piazza
Contact Info: Use Piazza Posts

IT Help: Provided by Viterbi IT
Hours of Service: 8 am – 5 pm; M – F
Walk-in: DRB 205
Contact Info: (213) 740–0517
Email: engrhelp@usc.edu

Catalogue Description

Accelerated introduction to Python; intended for students with prior programming experience.

Course Description

This course aims for students to be aware of fundamental concepts of the Python programming language to those students who already have some experience with a previous programming language. Python's high-level data structures and clear syntax make it a versatile language, while a large number of existing libraries make it suitable to tackle almost any programming task. Python offers an interactive environment in which to explore procedural, functional, and object-oriented approaches to problem-solving.

Learning Objectives

- Discuss the syntax of the Python programming language.
- Develop programs that use Python coding conventions in industry.
- Develop programs that utilize popular Python libraries.
- Demonstrate an understanding of data structures and their usages.

- Demonstrate an understanding of object-oriented programming by creating classes and corresponding objects in the implementation of the solution to a given problem.

Prerequisite(s): None.
Recommended Preparation: Any programming experience from any point in your life. Knowing the basics of coding: variables, branching, loops, and so on.

Course Notes

This course will make use of **Brightspace** (https://brightspace.usc.edu/) for content, labs, and assignments. Lecture slides and any supplemental course content will be posted to Brightspace for use by all students. All assignments and labs will be posted to Brightspace and will be submitted through Brightspace. Please familiarize yourself with Brightspace before the course begins.

This course will also use **Piazza** (https://piazza.com/) for answering questions and posting information about office hours. This is the preferred way to communicate with instructors and learning assistants (LAs).

Technological Proficiency and Hardware/Software Required

Students will need a computer (laptop or desktop) and access to the internet. If you do not have access to a computer, please see below. The software needed for this course is available for free online. All homework and projects will need software to be completed (available for Mac and Windows).

Download the latest version of **Python 3** at https://www.python.org/downloads/. You will also need to download and install PyCharm, which is an integrated design environment (IDE) for creating an tac 116 project and writing code. Download the latest version of **PyCharm CE (Community Edition)** at https://www.jetbrains.com/pycharm/download/. Students can choose to use online resources without installation too, one suggested method is **Google Colab:** https://colab.research.google.com/

USC Technology Rental Program

If you need resources to successfully participate in your classes, such as a laptop or internet hotspot, you may be eligible for the university's equipment rental program. To apply, please submit an application. The Student Basic Needs team will contact all applicants and distribute equipment to eligible applicants prior to the start of the semester.

TAC Computers

TAC has a limited number of laptops that are available to borrow for TAC classes. Eligible students will be able to borrow a MacBook or Dell XPS for TAC coursework once their request is approved and their contract is signed via DocuSign. Though the initial loan period is 7 days, they will still be able to renew their device and extend the loan period as in previous semesters. They will need to pop into one of TAC's Zoom device check-in sessions before the end of each week. If all of them have been checked out, then the student will be placed on the waiting list. You will not be able to save your work on the TAC lab computers and the TAC laptops. Once they are restarted, all work will be deleted. Use an external USB drive, or a cloud-based service like Google Drive or Dropbox to save your work. TAC is not responsible for any lost work. Information about the TAC Loaner Laptop Program and the request form can be found at https://tac.usc.edu/current-students/tac-device-check-outs/.

Optional Readings and Supplementary Materials:

Wentworth, P., Elkner, J., Downey, A. B., Meyers, C. (2012). *Learning with Python 3: How to Think Like a Computer Scientist*. http://openbookproject.net/thinkcs/python/english3e/

Description and Assessment of Assignments

There will be approximately 10 coding assignments which will be due on Friday at 11:59 pm PT (Pacific Time). Each assignment covers the material from the current week (and past weeks since concepts build upon each other) and is due the following week. For example, Assignment 1 covers the material from week 1, and is due on Friday during week 2. The assignments will be posted on Brightspace under the Content. Each assignment will include instructions, a grading rubric, and a link for electronic submission. Students should follow the instructions of the assignments to receive full points. Assignments must be submitted using this link. You must code the solutions according to the content taught in this course. Using coding techniques and modules outside the content of this course is not allowed and will receive penalties. Each assignment must be completed individually, following the instructions. Do not collaborate with other students for these assignments. If you need help, please ask for help by posting on Piazza and attending office hours.

In-Class Labs

There will be approximately 10 in-class labs, in which the instructor will go over the solutions and explanations. The labs are due on Saturday at 11:59 pm PT (Pacific Time). Labs must be submitted on Brightspace. The two lowest scores will be dropped. There is no late policy for labs since late labs will not be accepted.

Midterm Exam

The midterm exam will be an in-person test during week 8. You will have a single-page, double-sided reference (cheat) sheet available for the exam.

Make-up exams will not be offered, except for documented medical or family emergencies. If you cannot take the 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 approved university personnel during the time you are gone, or within the week the test is given. If you do not take the test, then you will receive a 0 for the test.

If you need accommodations, register with OSAS (Office of Student Accessibility Services). Once you receive your accommodation letter, share your letter with the instructor at least one week before the test. You may give this document to instructors in person, send an email, or post it on Piazza. This will allow time for arrangements to be made.

Final Exam

The final exam will be an in-person exam that will occur on the day and time according to the Final Examinations Schedule at https://classes.usc.edu/. This exam will cover all course materials. You will have a single-page, double-sided reference (cheat) sheet available for the exam.

Grading Breakdown

Category	% of Grade
Coding Assignments	25
In-Class Labs	25
Midterm Exam	25
Final Exam (cumulative)	25
TOTAL	100

Grading Scale

Course final grades will be determined using the following scale:

Letter grade	Corresponding numerical point range
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 < 67
F	< 65

For the Pass/No Pass grading option, you must earn at least 70% to pass.

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 the 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. By the end of week 3, two labs and two assignments are due.

Assignment Late Policy

It is the student's responsibility to submit assignments on or before the due date. Assignments may be submitted within five days with a late penalty. Assignments will incur a deduction of 10% of the total points from the graded score for each late submission day (24 hours). After three days, submissions will not be accepted, and the score for the assignment will be a 0.

Only in extreme situations and emergencies you may ask for an assignment's late policy to be waived for various reasons. This needs to be approved before the due date of the assignment. To ask for a waiver, please contact the instructor using Piazza. Do not contact LAs for this since they are not authorized to approve these requests.

Each student will receive three "tokens" that may be used as late passes. Tokens cannot be used for extra credit and have no value other than to allow all students an equal opportunity to have more time as needed.

Tokens may be used for late submission of assignments (1 token for up to 24 hours) without receiving penalties. Even with tokens, assignments submitted after 3 days will be graded 0. Tokens do not apply to labs.

You can ask for a resubmission of an assignment (for example, incorrect submission or more than 3-days late submission) using 5 tokens. This request should be done before Week 13.

To use a token, you will fill out a Google form. You will have in-class opportunities to earn tokens throughout the semester.

Assignment Grading Timeline

Assignments will be graded within two weeks (mostly under one week). Students have one week to contest a grade once it has been posted on Brightspace. 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, your instructor, your section, the assignment name, and your reasons. This will allow the grader, instructor, and head LA (Learning Assistant) to view your submission and make a decision. Do not email the grader directly. All communication regarding grading issues needs to be seen and approved by the instructor.

Attendance

Attendance is not part of the grading breakdown, although attending classes will help you learn the material and succeed in this course. If you are not able to attend synchronously, then it is your responsibility to watch the recorded lectures and complete the in-class labs.\

Classroom Etiquette

The instructor expects you to pay attention during lectures and be an active learner. 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. If you are not able to attend lectures, then you should watch the recorded lectures and complete the in-class labs.

Communication

The preferred way to communicate with instructors and LAs is posting on Piazza (http://piazza.com). All TAC 116 students, instructors, and LAs will have access to the same class on Piazza. Information about accessing Piazza is available on Brightspace. 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 that all members can see and answer or private posts to individuals which are only accessible to instructors and LAs. To make a private post to all instructors and LAs, next to “Post to” select the “Individual Students(s) / Instructor(s)” option and enter “Instructors” in the text field.

Students should NOT directly email the LAs or graders: all correspondence with the LAs should be done on Piazza. If a direct email is required for any reason, the student must cc the instructor in the email.

OSAS Accommodations

If you have course accommodations authorized by OSAS (Office of Student Accessibility Services), please email the instructor or post privately on Piazza and attach your accommodation letter by the end of Week 3. In the body of the message, include your name and your class section. In addition, reach out the week before the test to discuss details for coordinating specific test accommodations.

Academic Integrity

The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic misconduct is in contrast to the university’s mission to educate students through a broad array of first-rank academic, professional, and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the USC Student Handbook. All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or “recycle” work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage. The impact of academic dishonesty is far-reaching and is considered a serious offense against the university and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

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 similarities. Any sharing of ideas or code will be considered a violation of academic integrity (cheating). Do not share your code with anyone else in this or any future section of the course, as allowing someone else to copy your code carries the same penalty as you copying the code yourself. Do not submit another person's work as your own. Do not look at other students' papers during tests. Do not collaborate during online tests. Do not cheat.

Past students that have been found to have violated academic integrity standards have each received a 0 on the assignments and projects. Many times this has led to an F in the course.

Use of Artificial Intelligence (AI) Tools like ChatGPT

In this course, you are permitted to use artificial intelligence (AI)-powered programs to help you, but only on assignments that explicitly indicate a permitted use of AI. However:

- You should also be aware that AI text generation tools may present incorrect information, biased responses, and incomplete analyses; thus, their answers may not meet the standards of this course.
- To adhere to our university values, you must cite any AI-generated material (e.g., text, images, and other content) included or referenced in your work and provide the prompts used to generate the content. Using an AI tool to generate content without proper attribution will be treated as **plagiarism** and reported to the **Office of Academic Integrity**.

Please **review** the **instructions** in each assignment for more details on how and when to use AI Generators for your submissions.

Course Content Distribution and Synchronous Session Recordings Policies

USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.

Recording a university class without the express permission of the instructor and announcement to the class is not allowed unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation. Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. (Living our Unifying Values: The USC Student Handbook, page 13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study is not allowed. This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relation to the class, whether obtained in class, via email, on the internet, or via any other media. (Living our Unifying Values: The USC Student Handbook, page 13).

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. Students may not post the course materials on sites such as CourseHero and Chegg. Doing so is a copyright violation and an academic integrity violation that will be dealt with accordingly.

Course Schedule: A Weekly Breakdown

	Topics	In-Class Lab	Coding Assignment
Week 1	Course Introduction Variables and Print	-	Install Python
Week 2	Inputs Operator	-	Guideline Read
Week 3	Branching String Methods	Lab 1	Assignment 1
Week 4	While Loops Short-circuits	Lab 2	Assignment 2
Week 5	Sequences For Loop	Lab 3	Assignment 3
Week 6	Lists Tuples	Lab 4	Assignment 4
Week 7	Dictionaries	Lab 5	Assignment 5
Week 8	Review Midterm	-	Midterm
Week 9	Functions JSON and API	Lab 6	Assignment 6
Week 10	Functions Cont. File reading	Lab 7	Assignment 7
Week 11	Data Analytics: Pandas	Lab 8	Assignment 8
Week 12	Pandas Cont. Numerical Analysis: Numpy	Lab 9	Assignment 9
Week 13	Numpy Cont.	Lab 10	Assignment 10 - mini project
Week 14	Data Viz Thanksgiving	-	-
Week 15	Objects	-	-
FINALS	Final Exam	-	-

The labs will be due Saturday 11:59 pm of the week they are assigned. The coding assignments will be due Friday 11:59 pm of the next week they are assigned. It is the student's responsibility to submit assignments on or before the due date. You can find the due date information of each lab and coding assignment on Brightspace.

Statement on Academic Conduct and Support Systems

Academic Integrity:
The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, comprises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university's mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s).

Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see the student handbook or the Office of Academic Integrity's website, and university policies on Research and Scholarship Misconduct.

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

Students and Disability Accommodations:
USC welcomes students with disabilities into all of the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at https://osas.usc.edu/. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

988 Suicide and Crisis Lifeline - 988 for both calls and text messages – 24/7 on call
The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL) – 24/7 on call
Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

Office for Equity, Equal Opportunity, and Title IX (EEO-TIX) - (213) 740-5086
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

The Office of Student Accessibility Services (OSAS) - (213) 740-0776
OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

USC Campus Support and Intervention - (213) 740-0411
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity, Equity and Inclusion - (213) 740-2101
Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call
Non-emergency assistance or information.

Office of the Ombuds - (213) 821-9556 (UPC) / (323-442-0382 (HSC)
A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

Occupational Therapy Faculty Practice - (323) 442-2850 or otfp@med.usc.edu
Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.