

Public Policy in Africa Initiative (PPiAI)

Coding Course Term I 2022

Instructor: David Sciacca
Email: dsciacca8930@gmail.com
Class Days/Time: Saturdays at 15:00 GMT through March 12th, then 14:00 GMT starting March 19
Classroom: <https://regis.zoom.us/j/91203326102>

Teaching Assistants

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Course Description

This course will be an Introduction to Programming course which will cover a basic introduction to the principles of programming, including algorithms and logic. Students engage in hands-on programming tasks in the Python programming language as they write and test their own code using the approaches professional programmers use in the field. Students will program with variables, data structures, functions and arguments, lists, loops, and classes providing a solid foundation for more advanced study as well as practical skills they can use immediately.

Course Goals

- Use software programs that are common in an IT workplace
- Learn and apply introductory programming skills to solve specific problems
- Write and test code

Upon successful completion of this course, each student will be able to:

- Read Python code and glean a basic understanding of what the purpose of the program is
- Write code in Python to solve specifically defined problems
- Test and debug Python code

Required Texts/Readings

- Python Notes for Professionals – can be downloaded for free from: <https://books.goalkicker.com/PythonBook/PythonNotesForProfessionals.pdf>
- Other readings as assigned

Other equipment / material requirements

Access to a computer with either the Windows, MacOS, or Linux operating system and admin privileges for installing software

Assignments and Grading Policy

Assignments will be given at the end of each lecture. You must complete assignments as assigned and turn them in (when applicable) via Email before the following lecture, otherwise it will be considered a failed assignment. We will provide feedback on the submissions and give a pass/fail grade on each assignment. If you fail the first attempt of the assignment, you will have an additional week to update the assignment as many times as needed in order to try to get a passing grade on the assignment. The final due date of revisions is before the second lecture after the assignment was initially assigned, i.e. two weeks.

Classroom Protocol

You are expected to join our lectures promptly at the agreed upon start time (see above) every Saturday. Please ensure you are muted when you join so as not to disrupt the lectures, especially if you are running late. If you have questions or comments you'd like to share with the class, please post them to the chat and I will do my best to address them in turn, time permitting.

Certificate of Completion

A Certificate of Completion will be issued at the end of the course to each student that meets all of the following criteria:

- Attends at least 80% of lectures
 - If you are unable to attend a lecture in person, you may view the lecture recording on YouTube after the fact. In order for this to count in lieu of attendance, you must post a comment to the YouTube recording **within 1 week of the original lecture time** stating:
 - 3 things you learned from the lecture
 - 2 questions you had on the contents of the lecture
- Receives a passing grade on 80% of assignments
- Actively works on a final project and completes a Final Project Presentation at the end of the course. Details of the final project and timelines are still in the works.
 - Can either be live during one of the two final presentation sessions at the end of the course OR recorded (w/ audio) and submitted

PPiAI Coding Class Term 1 2022 Course Schedule

Table 1 Course Schedule

Week	Date	Topics, Readings, Assignments, Due Dates, Deadlines
1	January 8, 2022	Course and peer introductions, software installation Optional Readings: Chapter 1
2	January 15, 2022	Data Types, Variables, and Operators in Python. Readings: Chapters 1.1-1.4, 2, 9, and 15 Assignment 1 Due
3	January 22, 2022	Conditionals and Data Structures Part I Readings: Chapters 7, 8, 14 Assignment 2 Due
4	January 29, 2022	Data Structures Part II Readings: Chapters 17, 18, and 19 Assignment 3 Due
5	February 5, 2022	Data Structures Part III Readings: Chapters 20, 21, 22, 24, 25, and 28 Assignment 4 Due
6	February 12, 2022	Loops, Iterables, and Iterators Readings: Chapters 16 and 32 Assignment 5 Due
7	February 19, 2022	Input and Output (I/O), Files and Folders Readings: Chapters 29 and 30 Assignment 6 Due
8	February 26, 2022	Functions Readings: Chapters 33, 34, 36, and 42 Assignment 7 Due
9	March 5, 2022	Classes and Error Handling Readings: Chapters 38, 88, 89, and 90 Assignment 8 Due
10	March 12, 2022	Modules and Packages Readings: Chapters 43, 44, and 45 Assignment 9 Due
11	March 19, 2022	Unit Testing Readings: Chapters 192 and 293 Assignment 10 Due

12	March 26, 2021	Final Project Presentations Assignment 11 Due
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