

# Introduction to Python Workshop

*“Most good programmers do programming not because they expect to get paid or get adulation by the public, but because it is fun to program.”*  
— Linus Torvalds

Fall 2017

Wednesday 7:00-8:00 PM

CPE 2.216

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## Instructors & Office Hours:

Alex Collins	<a href="mailto:alexardenc@utexas.edu">alexardenc@utexas.edu</a> TTH 2:15 to 3:15 pm @ EER 2.628
Dan Tran	<a href="mailto:tran.tamdanv@utexas.edu">tran.tamdanv@utexas.edu</a> W 3:30 to 5:30 pm @ EER 2.628
Anirudh Sivakumar	<a href="mailto:ani_sivakumar-1@utexas.edu">ani_sivakumar-1@utexas.edu</a> T 6 to 7 pm and W 5:30 to 6:30 pm @ CPE OXE Room
Eduardo Priego	<a href="mailto:epriego@utexas.edu">epriego@utexas.edu</a> TTH 11 am to 12 pm @ EER 2.628

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## COURSE DESCRIPTION

This course has been designed to serve as a student's first introduction to programming. We will be using the popular programming language Python. Python is a modern programming language that is simple to understand and use. We will cover the very basics of computer programming and build up tools and techniques until we get to work with recursion, a powerful method for creating powerful programs.

## Course Aims and Outcomes:

If you are interested about programming and want to find out more about how everything we use every day of our lives works then this is the course for you. If you put in the work required in this course, which includes active participation, completing the assignments, and programming on your own, you will have a good understanding of what programming is, how to write efficient programs, and be able to interpret problems and come up with solutions.

## Learning Outcomes:

By the end of this course, students will:

- Understand the basics of computer programming
- Know how to design and implement algorithms to solve problems
- Write efficient computer programs

## **Format and Procedures:**

The course consists of eleven half hour classes held once a week. In class, we will cover the material assigned for each class. During class we will first explain the theory behind the programming technique we will be learning, followed by some examples. Then we will work on class assignments to get hands-on experience.

## **How to Succeed in this Course**

The key to successfully learning how to program is to program. To do this you must read the assigned material and attentively listen to the class lectures. Then, work through the class assignments with your instructors. The homework assignments are the best chance you have to improve your programming skills. Spending time and effort working on the homework assignments by yourself will be what sets you apart as a student who *can* program as opposed to student who *knows* about programming.

## **COURSE REQUIREMENTS**

### **Required Materials and Devices**

You will be required to bring your computer. We will help you install the necessary applications in the first class. The textbook we will be using throughout the course is *Introduction to Programming Using Python* by Y. Daniel Yang, 1st edition. The textbook is not necessary, but if you want to have a useful resource we highly recommend it.

### **Classroom Expectations**

*Class attendance* While you are not required to assist to every class, we will not cover material from a previous class in another. If you wish to learn programming, come to every class. If you miss class, you can come to office hours to catch up.

*Class participation* Just by being in class is not enough. If you have any questions we expect you to ask them. You are also expected to complete the class assignments and the homework assignments every week.

### **Assessments and Grading**

Although the course is not officially graded, we will be grading homework assignments. This will help you see how well you are doing in the course, as well as to help identify what topics you should put more effort in. Your grades will not be made public, and are for in-class use only.

## Course Schedule

<b>Date</b>	<b>Main Topic(s)</b>	<b>Readings</b>	<b>Assignments given</b>
9/20	Introduction	Chapter 1	HW 1
9/27	Basic Programming	Chapter 2 and 3	HW 2
10/4	If Statements	Chapter 4	HW 3
10/11	For Loops	Chapter 5	HW 4
10/18	While Loops	Chapter 5	HW 5
10/25	Functions	Chapter 6	HW 6
11/1	Functions	Chapter 6	HW 7
11/8	Strings	Chapter 8	HW 8
11/15	Lists	Chapter 10	HW 9
11/2	Thanksgiving Break		
11/29	Recursion	Chapter 15	HW 10
12/6	Recursion	Chapter 15	