# DAT208x: Introduction to Python for Data Science

## Course Prerequisites

None, but previous experience in basic mathematics is helpful.

## Course Schedule

This course is available in self-paced format. The deadlines associated with the graded quizzes and labs are set to the end date of the course, which is displayed on the course **Home** page. You can listen to the lecture, attempt the quizzes, and work on the labs exercises at any time prior to the deadline. You should complete the quizzes/labs on your own to fully learn the material before you start the next module.

## Course Topics

Module 1: Python Basics

Take your first steps in the world of Python. Discover the different data types and create your first variable.

Module 2: Python Lists

Get the know the first way to store many different data points under a single name. Create, subset and manipulate Lists in all sorts of ways.

Module 3: Functions and Packages

Learn how to get the most out of other people's efforts by importing Python packages and calling functions.

Module 4: Numpy

Write superfast code with Numerical Python, a package to efficiently store and do calculations with huge amounts of data.

Module 5: Matplotlib

Create different types of visualizations depending on the message you want to convey. Learn how to build complex and customized plots based on real data.

Module 6: Control flow and Pandas

Write conditional constructs to tweak the execution of your scripts and get to know the Pandas DataFrame: the key data structure for Data Science in Python.

## Expected Effort

Each module, you should expect to spend 2-4 hours on the course, including:

- Viewing the lecture videos and demonstrations
- Completing the quizzes
- Completing the lab exercises
- Further reading

## Coursework and Grading

This course includes coursework, some of which is graded. Each module in the course includes lecture videos, graded short quizzes, and graded lab exercises. The quizzes account for 30% of the total grade, the lab exercises accounts for 30% of the total grade, and the final exam accounts for the remaining 40%.
You must achieve an overall score of 70% to pass the course. For the quizzes/labs questions, you have between one to four maximum attempts at each question, depending on the type of the question.

## Discussion

We encourage all students to submit questions, observations, and comments in the Discussion section. If you have any issues while working on the course, check there first – your fellow students may have already found a resolution!

Please remember that the discussion forum is open to all students and staff, and while we love to see passionate engagement, abusive or inflammatory behavior will not be tolerated.

Due to the volume of students attending this course, it will not be possible for the course staff to answer every question individually. You should still post questions however, because in many cases, your fellow students may be able to help.