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 November 28th, 23:30 UTC. You should complete the quizzes/labs on your own to fully learn the material before you start the next module.

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Modules</th>
<th>Deadline</th>
</tr>
</thead>
</table>
| March 8th, 08:00 UTC    | Start Here
1. Python Basics
2. Python Lists
3. Functions and Packages
4. Numpy
5. Matplotlib
6. Control Flow and Pandas
Course Wrap-up           | November 28th, 23:30 UTC                   |
| November 28th, 23:30 UTC | All quizzes and labs are due                | All quizzes and labs are due     |

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 1-2 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 65% of the total grade, and the two mandatory surveys account for the remaining 5%. You must achieve an overall score of 65% 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.