STAT 3250 **Course Syllabus** **Fall 2022**

Instructors:	James Lee (MW 3:30-4:45), Jeff Holt (MW 5:00-6:15)
Help Hours:	Tuesdays 7:00-8:30pm ET (Zoom; see Collab for link)
	Wednesdays 6:30-7:30pm ET (108 Clark Hall)
e-mail:	James Lee: `jl5mw@virginia.edu`
	Jeff Holt: `jeff@virginia.edu`

Prerequisites: (a) Prior coding course(any language is fine), with enough depth to have a basic understanding of loops, it/else statements, data types, and other basic concepts; (b) an introductory knowledge of statistics. (See SIS for the specific courses required to enroll.)

Course Overview: This is an introductory course on the use of Python to manipulate and analyze data. Topics will include an introduction to Python basics, including loops and if/then conditionals; the NumPy package, the Pandas package; data loading and storage; data wrangling and aggregation; data display and visualization; selected data analysis methods; and other topics as time permits.

The best way (by far!) to learn to use Python is by working with Python. This course is hands on, with most of each class meeting devoted to working on assignments. (Lectures will be recorded for asynchronous viewing.) The instructor and course assistants will be available to answer questions during class and the evening drop-in help sessions.

Text: There is no required text for this course. Instead, we will use a combination of materials provided in class and online resources as needed. Two optional reference books are

- *Python for Data Analysis* by Wes McKinney
- *Python Data Science Handbook* by Jake VanderPlas

We will discuss selected topics from these books. They are available online, or hard copies can be purchased for about $50 each.

Technology: You will need regular access to a laptop computer for this course, please plan to bring it to class. We will be programming in Python, using the Anaconda suite of development tools. A version of Anaconda is available for free download. We will use version 3 of Python.

Course Activities:

- Lectures will be recorded in advance for asynchronous viewing at your convenience. The lectures will usually be posted on Wednesdays at the same time the corresponding assignment is posted.
- Weekly class times (MW 3:30-4:45, MW 5:00-6:15) will be used for brief announcements and (on Wednesdays) assignment introductions. Most class meeting time will be devoted to in-class work and help.
- The weekly drop-in help will be conducted Tuesday on Zoom and Wednesday in person (Clark 108). The Zoom link is in the Overview section of Collab.
- Instructor meetings for one-on-one discussions about issues other than course assignments can be arranged on an as-needed basis by contacting your instructor.

Assignments: There will be assignments due most Wednesdays at 11:30pm ET. You will be submitting your assignments electronically in Gradescope.

- Each assignment is worth 50 points. A portion of each assignment will be graded automatically by Gradescope. Some questions will be configured so that you can check if parts of your answer are correct in advance of the final submission. Specific details of this process will be discussed in class, including a practice assignment so that you can see how it works.
- Assignments typically will be posted on Wednesdays (a week before the deadline) by the start of class.
- Assignments will be due on Wednesdays (7 days after posting) at 11:30pm ET.
- Assignments submitted late are subject to a score deduction as follows:
  - Late submissions within one hour of the deadline will have a 2 point deduction. There are no exceptions to this policy for any reason. It is recommended that you not wait until the last minute to submit your assignment.
  - Submissions that are more than one hour late will have a 5 point deduction per 24 hour period. Thus between 1 hour and 24 hours late is a 5 point deduction, between 24 and 48 hours late is a 10 point deduction, and between 48 and 72 hours late is a 15 point deduction. Assignments will not be accepted more than 72 hours late.
- There will be a total of 13 assignments. There are no dropped assignments, but your lowest assignment score will count 50% of the other assignments. (Your lowest score will be divided in half, and that assignment will be worth 25 points.)
- Assignment scores will be available by 11:30pm ET on the Monday following the due date. The deadline for appeals is 11:30pm ET on the Wednesday two days after the assignment score is posted. You can appeal the scoring on up to two assignments.
- You are welcome to discuss these assignments with classmates, but you must prepare and submit your own work. (Submitting the work of someone else as your own is a violation of the Honor Code.)
- Assignments are intended to be worked on in class, so questions about them can be asked during class and during drop-in help sessions. Questions about assignments cannot be answered by email.

Course Grade: The course grade is determined by the total number of points on the 13 assignments (including the adjustment of one assignment to a maximum of 25 points). The points will be converted to a letter grade as follows: If P is the number of points (rounded to the nearest integer), then

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\begin{aligned}
595 \leq P \leq 625 &\rightarrow \text{A} \\
575 \leq P \leq 594 &\rightarrow \text{A}- \\
554 \leq P \leq 574 &\rightarrow \text{B}+ \\
533 \leq P \leq 553 &\rightarrow \text{B} \\
512 \leq P \leq 532 &\rightarrow \text{B}- \\
490 \leq P \leq 511 &\rightarrow \text{C}+ \\
468 \leq P \leq 489 &\rightarrow \text{C} \\
446 \leq P \leq 467 &\rightarrow \text{C}- \\
424 \leq P \leq 445 &\rightarrow \text{D}+ \\
402 \leq P \leq 423 &\rightarrow \text{D} \\
380 \leq P \leq 401 &\rightarrow \text{D}- \\
0 \leq P \leq 379 &\rightarrow \text{F}
\end{aligned}
$$

Disclaimer: This course organization is new. The instructors reserve the right to update the syllabus based on course needs as the semester progresses.