Course Syllabus – Spring 2026

Introduction to Programming for Data Science using Python

TECH-UB 25, Spring 2026

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NYU Stern School of Business

Course Information

In addition to providing an overview of how Python is used in the business world today, this course, intended for those with no programming background, will teach students how to program and manipulate basic data using Python 3. This is an interactive course and key concepts will be reinforced with students coding synchronously with the instructor. After the completion of the course, students will be able to write intermediate level programs using Python and effectively use AI as an acceleration tool.

By the end of this class, in addition to understanding the uses of Python and command line basics, students will be able to use Python to:

- Create structured data with lists, tuples, and dictionaries
- Use conditional and loop constructs to control flow execution
- Create and execute functions
- Test & debug programs
- Create object-oriented python programs

Instructor Information

Instructor: Dr. Grace Haaf
E-mail: grace.haaf@nyu.edu
Professor office hours: Tuesday, 12:00pm, KMC 8-66 (and by appointment)

Teaching Assistant: Parth Gohil
E-mail: parth.goil@stern.nyu.edu
TA office hours: TBD

Course Materials

Textbooks (optional): *Murach's Python Programming* by Michael Urban and Joel Murach, 2016 Edition
Software (required)

- Sublime (text editor)
- Python 3
- IDLE
- Cursor
- Git Bash (Windows only)

Course Overview

Course Schedule

Tentative and subject to change. Assignments will be due approximately weekly.

Date	Topic	Book chapter
Class 1	Introduction and syllabus	Chapter 2
Class 2	Environments and AI tools	Chapter 1
Class 3	Types of data and variables	Chapter 2
Class 4	Manipulating variables	Chapter 2, 5.1, 9
Class 5	Manipulating variables – strings, comparisons	Chapter 3
Class 6	Basic data structures	Chapter 6, 12
Class 7	Control statements	Chapter 3
Class 8	**MIDTERM**	
Class 9	Functions	Chapter 4
Class 10	Testing and debugging	Chapter 5
Class 11	Data input/output	Chapter 7
Class 12	OOP	Chapter 14, 15, 16
Class 13	OOP	Chapter 14, 15, 16
Class 14	Review	
Class 15	**FINAL EXAM**	

Grading

Students will meet 2x a week for 1.25 hours for 7.5 weeks (15 sessions total) for this 1.5-credit course. Students are expected to attend all scheduled classes. If you will miss class for an accepted reason (see Attendance, religious observances, and other absences), you must inform your instructor no later than the first week of class when applicable. If you know you must miss more than one class, it is recommended you wait to take this class during a semester when you have fewer conflicts as it will be difficult to keep up. **You cannot miss the midterm or final exam for any reason.** If you have an emergency, deal with the emergency first then notify the instructor as soon as reasonably possible.

Grading Weights

Points will be given for participation, homework, and the midterm and final exams and have the following contributions to the course grade:

- Homework 10%
- Class Participation 20%
- Midterm 30%
- Final exam 40 %

Grading Percentages

Min % (≥)	Max % (<)	Letter grade
92.50		A
90.00	92.50	A-
87.50	90.00	B+
82.50	87.50	B
80.00	82.50	B-
77.50	80.00	C+
72.50	77.50	C
70.00	72.50	C-
67.50	70.00	D+
62.50	67.50	D
	62.50	F

Assignments

Homework counts for 10% of your grade and each assignment will be pass / fail. The grading is based on good-faith effort, not correctness. This is to incentivize students to take risks in doing the homework themselves rather than using an LLM, resulting in conceptual mastery of the material. While you may consult AI, **no code submitted for a graded assignment should be generated by an LLM or other AI tool.**

All assignments will be posted to our class NYU Brightspace site. You are responsible for looking at NYU Brightspace after each class period to learn about the next homework assignment and due date. Homework submission instructions will be made explicit in NYU Brightspace. Emailing it to the teaching assistant (although not recommended) is allowed in the event of technical issues.

Assignments are due at the date and time indicated on NYU Brightspace. **Late work will not be accepted**.

Class Participation

Class participation will be measured by attendance, submitted activities, and interactions in lectures. Unless explicitly stated, these will be considered "classroom" activities that are separate from homework. Homework assignments will be explicitly labeled as such.

Course Policies

Attendance, religious observances, and other absences

NYU's Calendar Policy on Religious Holidays states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. You must notify me in advance of religious holidays or observances that might coincide with exams, assignments, or class times to schedule mutually acceptable alternatives. Students may also contact religiousaccommodations@nyu.edu for assistance.

Except for religious observances or other absences that may be required in compliance with nondiscrimination law, this class otherwise requires attendance and participation and cannot accommodate conflicts. Please review all class dates at the start of the semester and review all course requirements to identify any foreseeable

conflicts with exams, course assignments, projects, or other items required for participation and attendance. If you are aware of a potential conflict, it is strongly recommended that you do not take this class.

Laptops, cell phones, and other electronic devices

This class requires students to bring laptops to every class for interactive programming labs. Laptops should only be used for designated, class-related activities and note-taking to minimize distractions. Cell phone use is prohibited excepting multi-factor authentication (MFA) for NYU or other relevant platforms (e.g. GitHub or AWS.)

Recording class

To ensure the free and open discussion of ideas, you may not record classroom lectures, discussion and/or activities without my advance written permission; any such recording can be used solely for your own private use. If you have approved accommodations from the Office of Disability Resources permitting the recording of class meetings, you must present the accommodation letter to me in advance of any recording. On any days when classes will be recorded, I will notify all students in advance. Distribution or sale of class recordings is prohibited without the written permission of the instructor and other students who are recorded.

Instructional Technology E-mail Communication

I will contact you regularly via Brightspace. You should check for e-mails from me (reminders, logistics, updates, etc.) at the e-mail address connected to Brightspace. Please note that I will try to respond to your e-mails within one business day. Do not expect immediate responses to e-mails sent late at night or on the weekends.

Academic Integrity

Our undergraduate Academics Pillar states that ***we take pride in our well-rounded education and approach our academics with honesty and integrity***. Indeed, integrity is critical to all that we do here at NYU Stern. As members of our community, all students agree to abide by the **NYU Academic Integrity Policies** as well as the NYU Stern Student Code of Conduct, which includes a commitment to:

- Exercise integrity in all aspects of one's academic work including, but not limited to, the preparation and completion of exams, papers and all other course requirements by not engaging in any method or means that provides an unfair advantage.
- Clearly acknowledge the work and efforts of others when submitting written work as one's own. Ideas, data, direct quotations (which should be designated with quotation marks), paraphrasing, creative expression, or any other incorporation of the work of others should be fully referenced.
- Refrain from behaving in ways that knowingly support, assist, or in any way attempt to enable another person to engage in any violation of the Code of Conduct. Our support also includes reporting any observed violations of this Code of Conduct or other School and University policies that are deemed to adversely affect the NYU Stern community.

Breaches of academic integrity could result in failure of an assignment, failure of the course, or other sanctions, as determined by the Academic Affairs office. Prohibited use of AI is included under these policies.

Artificial Intelligence / large language models: Some graded work will allow AI usage and other components will not. **Assume that it is prohibited unless explicitly stated by the instructor.** If you are unsure about allowable

use, it is your responsibility to ask the instructor. “I didn’t understand what was allowed” after discovery of prohibited use will not be accepted and will be treated as an academic integrity violation.

Stern Code of Conduct

The Stern Code of Conduct and Judiciary Process applies to all students enrolled in Stern courses.

- For graduate students, information can be found here: https://www.stern.nyu.edu/uc/codeofconduct.
- For undergraduates, information can be found here: https://www.stern.nyu.edu/portal-partners/current-students/undergraduate/community/community-expectations

General Conduct and Behavior

Students are also expected to maintain and abide by the highest standards of professional conduct and behavior. Please familiarize yourself with Stern's Policy in Regard to In-Class Behavior & Expectations for Graduate and Undergraduate students.

- (https://www.stern.nyu.edu/portal-partners/registrar/policies-procedures/general-policies/code-conduct)
- (http://www.stern.nyu.edu/portal-partners/current-students/undergraduate/resources-policies/academic-policies/index.htm)
- NYU Student Conduct Policy (https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-student-conduct-policy.html).

Student Accessibility

If you will require academic accommodation of any kind during this course, you must notify me at the beginning of the course and provide a letter from the Moses Center for Student Accessibility (212-998-4980, mosescsa@nyu.edu) verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the Moses Center for Student Accessibility, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation. For more information, visit the CSA website: https://www.nyu.edu/students/communities-and-groups/student-accessibility.html

Student Wellness

Our aim is for students to be as successful academically as they can, and to help them overcome any impediments to that. Bookmark the NYU Stern Well-being Resource Hub (https://www.stern.nyu.edu/wellbeing) for existing services at NYU and Stern covering a wide variety of topics including financial well-being, relationship well-being, mental well-being, and more. Any student who may be struggling and believes this may affect their performance in this course is urged to contact the Moses Center for Student Accessibility (see also the Student Accessibility section of this syllabus) at 212-998-4980 to discuss academic accommodations. If mental health assistance is needed, call the NYU’s 24/7 Wellness Exchange hotline 212-443-9999. Find out more at http://www.nyu.edu/students/health-and-wellness/counseling-services.html