

Course Syllabus

[Jump to Today](#)

Course Description: This course introduces core programming basics- including data types, control structures, and algorithm development with functions- via the Python programming language for students without prior programming experience. The course discusses the fundamental principles of Object-Oriented Programming and their application in data science and analytics. (RE) Prerequisite(s): Computer Science 1313/1323, and/or permission of instructor.

Value Proposition: Out of all aspects of modern life, uncertainty is, *probably*, one of the most fundamental. The ability to program, model, and learn from *data* is absolutely crucial in making efficient business and engineering decisions. This course will address the topics that are essential for developing these skills focusing on data-driven techniques, machine learning, and linear mathematical programming.

Student Learning Outcomes: By the end of the course, students will be able to summarize, visualize, and analyze data sets using Python as a programming language. Through this course, students will develop an understanding of what methods and Python modules are available for analyzing real-life decisions.

Course Requirements, Assessment and Evaluation Methods:

Learning Management System (Canvas). Students are responsible for announcements and material covered in recorded lectures. You are responsible for checking the announcements and reading material from the class web page on the course Canvas Site.

Homework. Three homework problems (mini-projects) will be assigned throughout the semester. Late homework assignments will not generally be accepted. However, each student will be permitted one late homework assignments turned in not more than one week after the original due date. Requests for regrading of homework assignments will be considered only within a one-week period from the time graded work is returned in class.








Final Project. Students will be given a project to be delivered at the end of the semester. The project will require students to analyze a data set and apply techniques discussed in this course. A project report briefing the result and data interpretation will be expected at a date to be determined.

How to Be Successful in This Online Class: To maximize your success in this class:

- Get in the mindset of owning your learning
- Look through the syllabus and module layout, and establish a routine
- Make sure you have the right software tools
- Use the textbook!
- Attend office hours for extra help

The instructor reserves the right to revise, alter and/or amend this syllabus, as necessary. Students will be notified in writing and/or by email of any such revisions, alterations and/or amendments.

Course Summary:

Date	Details	Due
Sun May 22, 2022	 <u>Week 1 - Check on Learning</u> (https://canvas.ou.edu/courses/247581/assignments/1685872)	due by 11:59pm
Sun May 29, 2022	 <u>Homework 1 - Picking a Lab Partner</u> (https://canvas.ou.edu/courses/247581/assignments/1685872)	due by 11:30pm
	 <u>Week 2 - Check on Learning</u> (https://canvas.ou.edu/courses/247581/assignments/1685868)	due by 11:59pm
Sun Jun 5, 2022	 <u>Week 3 - Check on Learning</u> (https://canvas.ou.edu/courses/247581/assignments/1685866)	due by 11:59pm
Sun Jun 12, 2022	 <u>Homework 2 - Modeling a salary</u> (https://canvas.ou.edu/courses/247581/assignments/1685873)	due by 11:30pm
	 <u>Week 4 - Check on Learning</u> (https://canvas.ou.edu/courses/247581/assignments/1685867)	due by 11:59pm
Sat Jul 9, 2022	 <u>Home 3 - Determining Best Model</u> (https://canvas.ou.edu/courses/247581/assignments/1685871)	due by 11:59pm