

# Introduction To Scientific Programming

Winter Term 2021 3:10 MWF Mr. Gregg

## What this course is about

CMSC 210 is an introductory level course in computer programming with an emphasis on applications in mathematics and the natural sciences. This course is an introduction to programming using Python, with a heavy emphasis on numerical applications.

CMSC 210 is intended a single term stand-alone course in programming for students in mathematics or the sciences who just want to take a single course in programming. CMSC 210 is not suitable for students who intend to take more than one course in computer science: those students should take CMSC 150 instead of this course.

## Course Outline

Here is a list of topics we will cover and when we will cover them.

Week	Topic
1	Introduction to Python
1	Working with variables and arithmetic
1,2	Iteration and if-else
3,4	Working with functions
4,5	Classes
6	Numpy and Matplotlib
7	Pandas
8-10	Additional Applications

I anticipate giving two midterm exams, one in week 5 and another in week 8. I will announce specific dates as we get further into the term.

## Grading

Your grade will be based on the programming assignments, a midterm exam, and the final:

- Programming assignments - 60%
- Midterm - 15%
- Final - 25%

The late policy for homework assignments is 5% off for each class period the assignment is late, up to a maximum of 15% off. No work will be accepted after one week from the due date has passed. If you have a valid excuse for turning your work in late, please contact me to explain.

## Course materials

We will not be using a textbook for this course. Instead, I will maintain a comprehensive set of lecture notes on the course web site that will document everything we do in class. The URL for the course web site is

<http://www.lawrence.edu/fast/greggj/cmssc210.html>.

**Access to help**

If you need assistance with anything, you are welcome to see me in office hours or send me a question by email to [greggj@lawrence.edu](mailto:greggj@lawrence.edu). My office hours this term are 1:00-3:00 MWF and 2:00-4:00 TTh.