

Mathematical Computing, Fall 2021

Queens College, Math 250

Prof. Christopher Hanusa

<http://qcpages.qc.cuny.edu/~chanusa/courses/250/21/>

What you can expect in Mathematical Computing

Goal: Learn and Apply Mathematica.

- ▶ Good programming practices
- ▶ Fluency with basics the language
- ▶ Go deeper: Apply in a variety of situations
- ▶ Gain an ability to learn on your own

Style: Tutorial- and Project-based.

- ▶ Tutorials to gain knowledge (Go at your own pace)
- ▶ Projects to apply your knowledge
- ▶ Make Your Own: • Tutorial, • 3D sculpture, • App
- ▶ I provide the structure; you provide the subject.
- ▶ Cross-pollination is encouraged and expected!

We're back in person! How does that work?!?

(Do a little dance.) (Breathe.)

Following CUNY & QC Safety Guidelines

- ▶ Everyone wears masks on campus, indoors and outdoors.
- ▶ Everyone is vaccinated
(or is being tested every week and must maintain distance)
- ▶ You uploaded your vaxx info to CUNYFirst and it's verified.

Accessing campus (QC link)

- ▶ Four entrances to campus.
- ▶ At the entrance you tap your QCard. (Cross verified with info)
- ▶ You also need to use your QCard to access the Library
- ▶ Go downstairs, turn left, and RO 227 is right there.
- ▶ Use the library to study or for online classes before or after.

We will appeal to Flexibility and Humanity.

- ▶ Don't come to class if you're sick!

Class philosophy.

Class time is precious.

- (a) In class: lecture with simple examples; Home: complex concepts
- (b) Home: Watch video lectures; In class: work together to internalize

“Flipped classroom” for “content”.

- ▶ At home: Work through tutorials / watch video lectures.
- ▶ In class: Groups to work on challenge questions.

Time management is important.

- ▶ It's HARD! Set aside time every day to make progress.
- ▶ Follow the guidance to keep track of projects
- ▶ Study groups can keep you honest. Stick to a schedule.
“We're going to work every Tuesday at 3pm. Join the Zoom.

Use Campuswire to ask and answer questions!

A normal day in class

In class

- ▶ Arrive on time & Be ready to participate! (Designated Audience)
 - ▶ Discuss sticking points from Campuswire
- | | | |
|--|----|--|
| <ul style="list-style-type: none"> ▶ Challenge Questions ▶ More advanced problem-solving questions ▶ Group w/rotating driver | or | <ul style="list-style-type: none"> ▶ Project Work ▶ Dedicated time to make progress and ask questions on project ▶ Groups with similar interests |
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Outside class

- ▶ Learning outside class
 - ▶ Watch and work through tutorial, take notes
 - ▶ Ask and answer questions on Campuswire including Daily Question
 - ▶ Progress on your projects

To do well in this class:

- ▶ **Form good study groups.**
 - ▶ Discuss tutorials and classwork.
 - ▶ Bounce around ideas, topics, questions.
 - ▶ It helps to have people to talk through things with.
- ▶ **Put in the time.**
 - ▶ Three credits = 6–9 hours/week out of class.
 - ▶ Project work is expected outside class too.
 - ▶ You only get out what you put in.
- ▶ **Come to class prepared.**
 - ▶ **Review** previous day's concepts.
 - ▶ **Do** the homework & work on your projects.
- ▶ **Stay in contact.**
 - ▶ If you are confused, ask questions (in class and out).
 - ▶ Don't fall behind in coursework or homework.
 - ▶ I need to understand your concerns.

Everything posted online; Another homework Monday (many parts).

Creating a community

It's important to get to know each other.

- ▶ Jamboard? Jamboard! A collaborative whiteboard.
- ▶ We'll meet a few classmates in a breakout room and start exploring Mathematica.