

CMSE 201 Spring 2021 - Schedule*

Day	Topic
Jan 11-18	Reading, Reviewing, Reflection Period: No Virtual Classes (Read Welcome Email, Read course syllabus, Install Jupyter Notebook, Complete group CATME Survey, Complete Pre-semester survey)
1 (Jan 19/20)	Class expectations, pre-course survey, group sorting algorithm activity
2 (Jan 21/25)	Practice with basic python variables (Order of Magnitude Approximations)
3 (Jan 26/27)	Lists and loops
4 (Jan 28/Feb 1)	Data Ethics, Academic Integrity, Coding Practices
5 (Feb 2/3)	If statements + intro to functions
6 (Feb 4/8)	Quiz #1 + Functions
7 (Feb 9/10)	Modules (math and matplotlib)
8 (Feb 11/15)	NumPy Basics (loading and plotting data)
9 (Feb 16/17)	Basic statistics + pandas with economics data
10 (Feb 18/22)	Quiz #2 + Pandas with Flint Data
11 (Feb 23/24)	Working with "dirty data" and data formats
12 (Feb 25/Mar 1)	Linear regression (fitting polynomial models; interpreting the results of a fit)
(Mar 2/3)	Spring Break
13 (Mar 4/8)	Linear regression (fitting beyond the polynomial; curve fitting)
Q (Mar 9/10)	Quiz #3 + Project Idea Share-out
14 (Mar 11/15)	Intro to ordinary differential equations and "solve_ivp()"
15 (Mar 16/17)	Compartmental modeling 1
16 (Mar 18/22)	Compartmental modeling 2
17 (Mar 23/24)	Quiz #4 + More NumPy (array creation and manipulation focusing on 2D arrays)
18 (Mar 25/29)	Agent-based modeling 1 (Forest Fire)
19 (Mar 30/31)	Agent-based modeling 2 (Schelling 1D)
20 (Apr 1/5)	Random Numbers + Random Walks
21 (Apr 6/7)	COVID Simulation+Modeling; Project updates and in-class project work time
22 (Apr 8/12)	Climate Change Modeling 1
23 (Apr 13/14)	Climate Change Modeling 2
24 (Apr 15/19)	Student Project Presentations
25 (Apr 20/21)	Student Project Presentations
April 22-23	Study Days
Apr 26-Apr 30	FINALS WEEK: Quiz #5

*This is the tentative schedule prior to the start of the semester. The overall content shouldn't change, but ordering or deadlines may shift somewhat. If deadlines change, substantial notice will be given!