

Math Tools for Economists 1 (Econ 1078-002)

Spring 2021

Instructor:	Payne Hennigan	Email:	christian.hennigan@colorado.edu
Lecture Time:	MWF 11:30am { 12:20pm	Room:	Student Recreation Center B210
Office Hours:	Th 1:30pm { 3:30pm		

1 Course Information

Class Format: This class is intended to be an in-person lecture, meaning that there will be no online component. However, per University policy, the first month of class, until February 15th, will be taught online. We will be meeting synchronously over zoom during that time period. After this, we are scheduled to begin meeting in person, but this will all depend on University policy. We will adjust the course as needed. Office hours will be conducted entirely online for the duration of the semester. See the course page for zoom links for both the class and for office hours.

Required Materials: *Essential Mathematics for Economic Analysis. 5th Ed.* by Kurt Syds ter, Peter Hammond, and Arne Strom is the required text for the course. It serves as an excellent reference, and will be used in ECON 1088 as well. Use of the 4th edition is ok. You can buy used versions of both for very reasonable prices online. It is your responsibility to make sure that the material aligns (the only real difference between the 4th and 5th editions is the order of material and hence chapter numbers).

Prerequisites: There are no prerequisites for this course, though a solid understanding of high school math will serve you well. This class is the first of a two course sequence (ECON 1078 and ECON 1088). requirements.

Course Description: Economics as practiced today is a form of applied mathematics and uses many different mathematical skills to develop models to understand the world around us. This course teaches fundamental mathematical skills and logical thinking that will serve as a basis for economic thought. Topics include logic, algebra, number theory, set theory, graphs, functions, and more. We will explore these topics using "real world" examples.

This class will prepare you for more advanced calculus techniques found in ECON 1088. It is important to remember that what makes math difficult for some isn't the math itself, it's the language we use to describe it. If I asked you to perform some mathematical operation, such as driving a car (something that uses some incredibly advanced mathematical techniques), you could do it. The difficulty lies in describing what your brain is actually doing.

2 Course Policies

General policies

- *No makeup homework assignments or exams will be given.*
- It is the student's responsibility to inform me of any accommodations needed two weeks before an exam.
- I will conduct all course communications in class and through your CU email. Please do not email me from your personal/non-university email as it may get sent to my spam folder. Please use email and not canvas mail.
- If you have a question after I have sent out an email to the class, please send me a separate email so that your question does not get buried in a long email chain (and DO NOT use "reply all"). I may not respond to any emails that can be answered by reading the syllabus.
- Please allow 24 hours for me to respond to emails (on weekdays), although I will usually reply much faster. However, I can not discuss grades over email per FERPA guidelines.

Grades

- **Distribution:** Below is the weight given to each of the assignments you are expected to complete:

Midterm 1 (February 26th)	20%	Participation	15%
Midterm 2 (April 9th)	20%	Homework	15%
Final Exam (May 4th, 1:30-4pm)	30%		

- **Curving:** Midterms *may* be curved individually, and a curve *may* be applied to the overall course grade to conform to departmental standards. The highest overall average the department allows is a B-.
- **Letter Grade Cutoffs:** Below is the letter grade you will receive for the final score given in the class:

> 93	A	87-89.9	B+	77-79.9	C+	67-69.9	D+	60-59.9	F
90-92.9	A-	83-86.9	B	73-76.9	C	63-66.9	D		
		80-82.9	B-	70-72.9	C-	60-62.9	D-		

Assignments

- **Homework:** There will be 12 problem sets. They will generally (though not always) be due on Fridays before class. Unsubstantiated or illegible answers will receive partial credit at most. If homework is turned in late, it will receive an additional 20% grade reduction each day it's late. Once I post the answers (usually on Sunday), homework will no longer be accepted. Note your two

lowest problem set scores will be dropped. You are allowed to work on the homework assignments in groups (4 students per group max). Please turn in only one assignment per group, clearly marked with the names of all group members if you decide to work in a group. The homework is an integral part of the course and will be extremely helpful for checking and improving your understanding of the material. All homework will be submitted through canvas while we are online, and will be submitted in person when University policy allows us to meet in person.

Participation

- Participation is important. Your participation grade will consist mainly in attendance, which will be taken at the beginning of each class. There will also be periodic group work where groups will need to show the class their work or talk through how they solved something. Even though attendance is mandatory, keep in mind that due to Covid-19,

- follow public health orders, and
- if sick and you live off campus, do not come onto campus (unless instructed by a CU Healthcare professional), or if you live on-campus, please alert CU Boulder Medical Services.

Students who fail to adhere to these requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct and Conflict Resolution. For more information, see the policies on COVID-19 Health and Safety and classroom behavior and the Student Code of Conduct. If you require accommodation because a disability prevents you from fulfilling these safety measures, please see the "Accommodation for Disabilities" statement on this syllabus.