

ECON 1088-001 MATHEMATICAL TOOLS FOR ECONOMISTS 2

University of Colorado Boulder
Department of Economics
Spring 2025

Instructor:	Lucas Ladenburger	Time:	MWF 9:05 – 9:55 AM
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Office:	ECON 304	Office Hours:	W 10 - 11, F 11 - 12

Course Pages: <https://canvas.colorado.edu/>

The course syllabus, handouts, supplementary materials, and homework assignments will be posted on Canvas. Please check the course webpage frequently as I will be updating it with materials and assignments.

Course Description: This class is the second of a two-course sequence. It is a continuation of ECON 1078 and builds upon the algebraic foundation developed in that course. We will cover important mathematical tools used in economics and their applications. These tools include derivatives, optimization, and integrals. They will be used extensively in your subsequent economics courses.

Required Textbook: Knut Sydsaeter, Peter Hammond, and Arne Strom, *Essential Mathematics for Economic Analysis*, 6th Edition. (required)
(you may use an alternative edition - just make sure to match up the relevant chapters).

Prerequisites: ECON 1078 or equivalent

Grading Policies:

Attendance/Participation	10%
Homework	25%
Midterm 1	20%
Midterm 2	20%
Final Exam	25%

Letter Grade Distribution:

≥ 93.00	A	73.00 - 76.99	C
90.00 - 92.99	A-	70.00 - 72.99	C-
87.00 - 89.99	B+	67.00 - 69.99	D+
83.00 - 86.99	B	63.00 - 66.99	D
80.00 - 82.99	B-	60.00 - 62.99	D-
77.00 - 79.99	C+	≤ 59.99	F

Course Policies:

- **Attendance/Participation:** Attendance for the course is required. Participation will be logged via clicker questions during each lecture. Daily clicker points will be assigned 2/3 for attendance and 1/3 for correct answers. The three lowest scoring days will be dropped.

We will be using iClicker to enhance active learning and participation in this course. Unfortunately, the space we are in has insufficient Wi-Fi for the entire class to reliably use iClicker mobile polling on your personal devices. Therefore, you will need to obtain an iClicker remote for use in class. You may be able to [check one out for the semester](#) on a first-come, first-served basis from the [Norlin Library East Service Desk](#). You will also need to set up your [CU-provided iClicker account](#) and [register your clicker](#). You will not be able to use the iClicker student app to vote in class.

- **Homework:** There will be 6 graded homework assignments. I will announce the due dates for these in class. You may work in a group, however please be sure to clearly note all group members on your submission.
- **Exams:** All exams (midterms and final) will be in-person.

Midterms: I will not give any early or make-up exams. In the case that you have to miss a midterm due to a family or medical emergency, you must provide documentation to justify that absence before the scheduled exam time, and the weight for that midterm will be added to the final exam. In all other cases, a missed exam will result in a grade of zero for that exam.

Final exam: The final exam is cumulative. If you have 3 or more finals on the same day, you can arrange to take the last exam(s) at an alternate time. However, you must notify me of this no later than the 10th week of the semester and provide proof that it is your 3rd or more exam on that day.

Cheating on any exam is unacceptable. Any cheating instances will result in a grade of zero and a report to the Honor Code Council.

- **Email:** In addition to office hours, please always feel free to reach out via email. Please use my colorado.edu email address, I do not monitor the Canvas messaging platform. According to FERPA, I am not allowed to discuss grades via email. If you have any questions or concerns about your grade, please come see me during office hours.

University Policies:

- **Honor Code:** All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the [Honor Code](#). Violations of the Honor Code may include but are not limited to: plagiarism (including use of paper writing services or technology [such as essay bots]), cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. Understanding the course's syllabus is a vital part in adhering to the Honor Code.

All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution: StudentConduct@colorado.edu. Students found responsible for violating the [Honor Code](#) will be assigned resolution outcomes from the Student Conduct & Conflict Resolution as well as be subject to academic sanctions from the faculty member. Visit [Honor Code](#) for more information on the academic integrity policy.

- **Accommodation for Disabilities, Temporary Medical Conditions, and Medical Isolation:** If you qualify for accommodations because of a disability, please submit your accommodation letter

from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or DSinfo@colorado.edu for further assistance. If you have a temporary medical condition, see [Temporary Medical Conditions](#) on the Disability Services website.

If you have a temporary illness, injury or required medical isolation for which you require adjustment, please make arrangements with me before the relevant due dates.

- **Accommodation for Religious Obligations:** Campus policy requires faculty to provide reasonable accommodations for students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Please communicate the need for a religious accommodation in a timely manner. If you have a conflict, please make arrangements with me no later than the first week of the semester. See the [campus policy regarding religious observances](#) for full details.
- **Preferred Student Names and Pronouns:** CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.
- **Classroom Behavior:** Students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote, or online. Failure to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, marital status, political affiliation, or political philosophy.

For more information, see the [classroom behavior policy](#), the [Student Code of Conduct](#), and the [Office of Institutional Equity and Compliance](#).

- **Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation:** CU Boulder is committed to fostering an inclusive and welcoming learning, working, and living environment. University policy prohibits [protected-class](#) discrimination and harassment, sexual misconduct (harassment, exploitation, and assault), intimate partner abuse (dating or domestic violence), stalking, and related retaliation by or against members of our community on- and off-campus. The Office of Institutional Equity and Compliance (OIEC) addresses these concerns, and individuals who have been subjected to misconduct can contact OIEC at 303-492-2127 or email CUreport@colorado.edu. Information about university policies, [reporting options](#), and [OIEC support resources](#) including confidential services can be found on the [OIEC website](#).

Please know that faculty and graduate instructors are required to inform OIEC when they are made aware of incidents related to these concerns regardless of when or where something occurred. This is to ensure that individuals impacted receive outreach from OIEC about their options and support resources. To learn more about reporting and support for a variety of concerns, visit the [Don't Ignore It page](#).

- **Mental Health and Wellness:** The University of Colorado Boulder is committed to the well-being of all students. If you are struggling with personal stressors, mental health or substance use concerns that are impacting academic or daily life, please contact [Counseling and Psychiatric Services \(CAPS\)](#) located in C4C or call (303) 492-2277, 24/7.

Free and unlimited telehealth is also available through [Academic Live Care](#). The Academic Live Care site also provides information about additional wellness services on campus that are available to students.

Tentative Course Outline: (Note that the weekly coverage might change depending on our progress.)

Week	Date	Content
1	Jan 13-19	Syllabus, 6.1, 6.2
2	Jan 20-26	6.3, 6.4, 6.5
3	Jan 27-Feb 2	6.6, 6.7, 6.8
4	Feb 3-9	6.9, 6.10, 6.11
5	Feb 10-16	7.1, 7.2, 7.7
6	Feb 17-23	7.8, Review, Midterm 1
7	Feb 24-Mar 2	9.1, 9.2, 9.3
8	Mar 3-9	9.6, 8.6, 14.1
9	Mar 10-16	14.2, 14.3, 14.5
10	Mar 17-23	14.6, 14.9, 14.10
11	Mar 24-30	Spring Break, No Class
12	Mar 31-Apr 6	18.1, Review, Midterm 2
13	Apr 7-13	10.1, 10.2, 10.3
14	Apr 14-20	10.4, 10.5
15	Apr 21-27	Further topics
16	Apr 28-30	Final Review, No class on Friday, May 2
Final Exam	May 6	Tuesday, 1:30 p.m. - 4:00 p.m.

Important Dates:

- *First Day of Class:* Jan 13th
- *Martin Luther King, Jr. Holiday:* Jan 20th, No Class
- **Midterm 1:** Friday, Feb 21st
- **Midterm 2:** Friday, April 4th
- *Spring Break:* Mar 24th - Mar 28th
- *Last Day of Class:* Wednesday, April 30th
- **Final Exam:** Tuesday, May 6, 1:30 - 4:00 PM