

# ECON-1078-002: Math Tools for Economists 1

MWF 11:00 - 11:50

Room: ECON 117

Instructor: Peiyuan Li

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Class website: Canvas

Office: ECON 401

Office Hours: M & W 10:00 - 11:00 and by appointment

This syllabus will guide our class, but it is not set in stone. I will update it throughout the semester to ensure that it reflects our goals and progress.

**Course description:** This course is the first of two courses designed to give you the mathematical background necessary for future courses in business and economics. Topics to be covered in this course include basic college-level algebra, simple linear and nonlinear equations, functions and their graphs, systems of equations, set theory, summation, logic, and proofs.

**Textbook:** Essential Mathematics for Economic Analysis. Knut Sydsaster and Peter Hammond with Arne Strom. 4th Edition.

## **Grading**

20% Midterm 1

20% Midterm 2

30% Final Exam

20% Homework

10% Participation

**Letter Grade Distribution:**

$\geq 94.00$	A	73.00 - 76.99	C
90.00 - 93.99	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+	$\leq 59.99$	F

**Exams:** I will not give makeup exams, except in extraordinary situations. Note that the exams may not be intentionally comprehensive, but this material is inherently comprehensive therefore the exams may include material from previous sections. The Final exam will be cumulative.

**Homework:** I will be assigning five homework. I do this because mathematics is not a spectator sport. The only way to succeed when it comes to learning mathematics is practice, practice, practice. The homework will be assigned after we finish a chapter and due the following Friday in class. I will drop the lowest homework grade. I do not accept late homework. If you miss class the day the homework is due, you must send me an email containing a picture of your completed homework, and then I will accept the hard copy the next class you attend.

Note: your cumulative homework grade is the same portion of your grade as one Midterm. Please take advantage of this and take the homework seriously! You are welcome to work with classmates and see me in office hours if you are having trouble completing the assignments.

**Participation:** This portion of your grade will come entirely from the attendance of class. An attendance sheet will be passed around in class. I will drop three absences by the end of the semester.

**Computers and calculators:**

- I encourage you to use tools like graphing calculators/websites and computer algebra systems to better understand the material and work through the problem sets. However, “because my calculator said so” is not a good enough answer to a question with computations. Show me that you understand the mechanics.
- Cell phone calculators and graphing calculators are not allowed during exams. Calculators without graphing capability or a programmable memory are allowed during exams.
- Using computers in class for anything other than taking notes is strictly prohibited.

**Office Hours:** If you need help with course material, please see me during my office hours. If the posted office hours don't work for you, email me and we will set up an appointment.

If you need more help than can be provided in office hours, consider visiting the department's undergraduate tutor.

(Free drop-in tutorial lab:

<https://www.colorado.edu/economics/sites/default/files/attached-files/tutorial-lab.pdf>

Private tutor list (at cost):

[https://www.colorado.edu/economics/sites/default/files/attached-files/tutor\\_list\\_0.pdf](https://www.colorado.edu/economics/sites/default/files/attached-files/tutor_list_0.pdf))

## Tentative Course Outline

Week	Content
Week 1 (1/13, 1/15, 1/17)	1.1, 1.2, 1.3
Week 2 (1/22, 1/24)	1.4, 1.5
Week 3 (1/27, 1/29, 1/31)	1.6, 1.7, 2.1 Chapter 1 Homework(due 2/7)
Week 4 (2/3, 2/5, 2/7)	2.2, 2.3, 2.4
Week 5 (2/10, 2/12, 2/14)	2.5, 4.1, 4.2 Chapter 2 Homework(due 2/21)
Week 6 (2/17, 2/19, 2/21)	Review, 4.3 Midterm 1 (2/19)
Week 7 (2/24, 2/26, 2/28)	4.4, 4.5, 4.6
Week 8 (3/2, 3/4, 3/6)	4.7, 4.8, 4.9
Week 9 (3/9, 3/11, 3/13)	4.10, 5.1, 5.2 Chapter 4 Homework(due 3/20)
Week 10 (3/16, 3/18, 3/20)	5.3, 5.4, 5.5
Week 11 (Spring Break)	
Week 12 (3/30, 4/1, 4/3)	5.6, 3.1, 3.2 Chapter 5 Homework(due 4/10)
Week 13 (4/6, 4/8, 4/10)	Review, 3.3 Midterm 2 (4/8)
Week 14 (4/13,4/15,4/17)	3.4, 3.5, 3.6 Chapter 3 Homework(due 4/24)
Week 15 (4/20, 4/22, 4/24)	3.7, 15.1
Week 16 (4/27, 4/29)	15.2, Review

## University Policies

### **ACCOMMODATION FOR DISABILITIES**

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](mailto:dsinfo@colorado.edu) for further assistance. If you have a temporary medical condition or injury, see [Temporary Medical Conditions](#) under the Students tab on the Disability Services website.

### **CLASSROOM BEHAVIOR**

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail 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, political affiliation or political philosophy. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on [classroom behavior](#) and the [Student Code of Conduct](#).

### **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 policy may include: plagiarism, 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. All incidents of academic misconduct will be reported to the Honor Code ([honor@colorado.edu](mailto:honor@colorado.edu); 303-492-5550). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the [Honor Code Office website](#).

## **SEXUAL MISCONDUCT, DISCRIMINATION, HARASSMENT AND/OR RELATED RETALIATION**

The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct intimate partner abuse (including dating or domestic violence), stalking, protected-class discrimination or harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or [cureport@colorado.edu](mailto:cureport@colorado.edu). Information about the OIEC, university policies, [anonymous reporting](#), and the campus resources can be found on the [OIEC website](#).

Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

## **RELIGIOUS HOLIDAYS**

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, if you have a conflict, please contact me at the beginning of the term so we can make proper arrangements.

See the [campus policy regarding religious observances](#) for full details.

The Office of Victim Assistance can be reached at 303-492-8855. Its <http://www.colorado.edu/ova/>.

The webpage [www.colorado.edu/undocumented](http://www.colorado.edu/undocumented) contains information regarding campus counseling resources available for students and employees with DACA Status.