

MATHEMATICAL TOOLS FOR ECONOMISTS I

ECON 1078-004 | FALL 2017 | MWF 1:00pm – 1:50pm | MUEN E131

COURSE SYLLABUS

Instructor Information

Instructor: Seamus X. Li
Email: seamus.li@colorado.edu
Office: ECON 313
Office hours: Wednesday 04:00pm – 05:00pm
Thursday 04:00pm – 05:00pm
Appointments outside regular office hours are available on a limited basis.

Course Website

Desire2Learn (D2L): <https://learn.colorado.edu/>
Assignment scores, problem sets, and supplemental course material will be posted on D2L.

Course Description

ECON 1078 teaches mathematical skills and logical thinking for use in economics. Topics include algebra, graphs, functions, and probability. Includes many "Real world" examples and some illustrative computer assignments. – CU catalogue

Economics relies heavily on mathematics for its inquiry. This course lays out the foundational algebraic tools used in economic analysis and prepares you for the calculus techniques that you will encounter in ECON 1088. We will examine topics such as the basics of logic, set theory, number theory, operations, functions, equations, inequalities, probability, and linear algebra with their applications in economics. In addition, we will be introduced to a few common quantitative analysis and mathematical typesetting computer applications.

Texts and Materials

Knut Sydsæter, Peter Hammond, and Arne Strøm (2012). *Essential Mathematics for Economic Analysis*, Pearson, 4th Edition.

You are welcome to use any other editions of this book; however, you may need to come to my office hours or consult a classmate with the 4th edition to determine material consistency. If I assign any problems directly from the textbook, I will reproduce them in full.

The course will also require the use of several pieces of computer software. All applications used are either open-sourced or group-licensed at CU Boulder and will be at no additional cost to enrolled students. For more information about CU group licensing and related resources, see the Office of Information Technology (OIT) webpage at <https://oit.colorado.edu/software-hardware>.

Prerequisites

While there are no prerequisites for this course, a solid understanding of high school common core mathematics is a very helpful asset for success. The course is a prerequisite for ECON 1088, which in turn satisfies the lower division math requirements for economics major and can serve as part of the prerequisites for upper division economics courses. Depending on your current level of mathematics learning, you may find this course too advanced or too rudimentary for your academic needs, in which case I strongly encourage you to consult with an Economics Advisor to discuss alternative options of fulfilling the math requirements. Follow the links below for additional information:

Economics major: <http://www.colorado.edu/Economics/undergraduate/major.pdf>

Economics minor: <http://www.colorado.edu/Economics/undergraduate/Minor.pdf>

Undergraduate advising: <http://www.colorado.edu/Economics/undergraduate/underadvising.html>

Grading

Your course grade will be based on the higher of the following two calculations of your final score. The higher score will be automatically chosen.

Method I		Method II	
Problem Sets	20%	Problem Sets	20%
Midterm I	20%	Higher Midterm	35%
Midterm II	20%	Final Exam	35%
Final Exam	30%	Quizzes	10%
Quizzes	10%		

Problem Sets. There will be five problem sets throughout the semester. You may work in groups, but you must turn in your own individual work. The problem sets will be graded primarily on completion. Show steps and write down your answers in a legible and organized manner. Answers without steps and illegible work will only receive partial credit. *Late work will not be accepted and will receive a zero for the assignment.*

Midterm Exams. There are two midterm exams. The midterms are not thematically cumulative and will test your understanding of the topics covered in the weeks preceding each exam. If you miss a midterm, your final score will be calculated according to Method II. As such, *under no circumstances will an early or make-up midterm be given.*

Final Exam. The final exam is cumulative. The final cannot be dropped according to University policy. If you require accommodation for the final exam due to a scheduling conflict, it is your responsibility to inform me in a timely manner pursuant to the University's final exam policy, which can be found at <http://www.colorado.edu/policies/final-examination-policy>.

Quizzes. There will be a pop quiz roughly every other week. Quiz dates will not be announced in advance. There will be no make-up quizzes, but the lowest quiz score will be dropped.

Extra Credit. Extra credit opportunities may become available during the course of the semester at the instructor's discretion. However, any extra credit opportunity will be made available to all students and will not be given on an individual basis.

Letter Grade. Curving may be applied at the instructor's discretion but it should not be expected. Your final score will be rounded *up* to the nearest integer and your course grade is determined by the following schedule:

Percentage	Grade	Percentage	Grade
94-100	A	73-76	C
90-93	A-	70-72	C-
87-89	B+	67-69	D+
83-86	B	63-66	D
80-82	B-	60-62	D-
77-79	C+	0-59	F

Tentative Exam Dates

Midterm I	Friday	10/06/2017	Regular class time
Midterm II	Wednesday	11/15/2017	Regular class time
Final Exam	Monday	12/18/2017	1:30pm – 04:00pm

All exams will take place in the regular classroom unless otherwise instructed. Other important dates can be found on the CU Academic Calendar:

<http://www.colorado.edu/academics/academic-calendar>

Office Hours

Office hours are great for having your questions answered in a one-on-one, interactive setting, and I highly encourage you to utilize this resource. If you are unable to visit during the regularly scheduled office hours due to a scheduling conflict, I will be happy to meet with you at an alternative time, subject to availability.

Email Policy

While I strive to be as accessible to you as possible through multiple communication channels, including the email, please observe the following policy regarding sending emails:

- I will be using your CU email address for class communications, please make sure you check your CU mailbox frequently for updates.
- Always refer first to the syllabus for questions regarding class policy. If the answer to your question can be found in the syllabus, you will likely be referred back to it.

- Some questions are better answered in person, especially questions regarding the course material. Please use the office hours as the first resource for any help you need on understanding the course material.
- Under no circumstances can I provide information about your performance on individual assignments or overall grade over the email due to Family Educational Rights and Privacy Act (FERPA) regulations, since emails are not considered a secure electronic medium. Scores that you have earned on individual assignments are posted on your D2L account.

Electronic Device Policy

Cellphones are to be on mute during lectures. You are welcome to use a laptop or a tablet computer for note taking and accessing learning materials online. However, if you are found to be using your electronic device in a disruptive manner, you will be asked to turn it off and put it away.

Disability Accommodations

If you qualify for accommodations because of a disability, please submit a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, and <http://www.colorado.edu/disabilityservices>

Classroom Behavior Policy

Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Faculty has the professional responsibility to treat all students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which they and their students express opinions.

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender variance, and nationalities. 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. See policies at <http://www.colorado.edu/policies/classbehavior.html> and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_cod

Religious Observance Policy

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts

with scheduled exams, assignments, or required attendance. If you have a conflict, please contact me at the beginning of the term so we can make proper arrangements.

Honor Code

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273).

Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at <http://www.colorado.edu/policies/honor.html> and at <http://www.colorado.edu/academics/honorcode/>

Discrimination & Harassment Policy

The University of Colorado Policy on Sexual Harassment applies to all students, staff and faculty. Sexual harassment is unwelcome sexual attention. It can involve intimidation, threats, coercion, or promises or create an environment that is hostile or offensive. Harassment may occur between members of the same or opposite gender and between any combinations of members in the campus community: students, faculty, staff, and administrators. Harassment can occur anywhere on campus, including the classroom, the workplace, or a residence hall. Any student, staff or faculty member who believes s/he has been sexually harassed should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the ODH and the campus resources available to assist individuals who believe they have been sexually harassed can be obtained at: <http://www.colorado.edu/odh/>