

# ECON1078-001 Math Tools for Economists

Fall 2008

**Instructor:** Ying Li  
**Class Meeting Times:** MWF 2:00-2:50 pm @ MUEN E0046  
**Office Location:** Econ 306 (3<sup>rd</sup> Floor of the Economics Building)  
**Office Phone:** 303-492-6023  
**Email:** [liy@colorado.edu](mailto:liy@colorado.edu)  
**Class Website:** On CULearn  
Relevant materials to the course will be posted here.  
**Office Hours:** MW 12:15 pm-1:30 pm AND by appointment

## Course Description and Objectives:

The goal of this course is to provide students the basic mathematical tools needed for business and economics. The materials covered in this course include: rules of algebra, solving linear and nonlinear equations, essentials of set theory, and functions. For a complete list of topics see the course schedule that follows.

## Textbook:

*Essential Mathematics for Economic Analysis*, 2<sup>nd</sup> edition, by Knut Sydsaeter, and Peter Hammond. You will also use this book for ECON1088. Since you can always refresh your knowledge of algebra and calculus by referring to this book, *please keep it as your reference book for undergraduate courses.*

## Grading:

(15%) Top 4 quizzes out of 5  
(25%) Midterm1  
(25%) Midterm2  
(30%) Final  
(5%) In-class assignments

100-90%	A
89-80%	B
79-70%	C
69-60%	D
59&below	F

## Quizzes:

There will be 5 quizzes in this class. The lowest one will be dropped. There will be no makeup quizzes given.

**In-class Assignments:**

I will randomly give you in-class assignments during the class. Each one has the same weight. There will be no makeup assignments given.

**Midterms and Final:**

There will be two midterms and a final in this course. Each midterm has 50 minutes and the final has 150 minutes. While the final is cumulative, similar questions from the first midterm might also be given again in your second midterm since the materials do build up. All exams are held in HUMN 1B80.

**Problem Sets:**

There will be problem sets for this class. Since the problem sets will be posted on CULearn, you should check it regularly. You do **NOT** have to hand in your problem sets. However, I strongly encourage you to finish them since they will be very helpful for exams.

**General Policies:**

- (1) There will be NO make-up in-class assignment, quiz, or exam for this class without formal documentation, like doctor's note. For your midterms, if you miss any of them, your final will be weighted automatically. Of course, you CANNOT miss the final.
- (2) If you have 3 final exams in the same day, and this is the last of your finals, you have the right to take this final on another day. To qualify for rescheduling the final exam time, you must provide evidence and let me know no later than October 3<sup>rd</sup>.
- (3) If you have any question about the materials, like questions in problem sets, you are more than welcome to come to my office hours after making appointment with me.
- (4) You are responsible for any missing class. If you miss any class, please borrow the notes from others and read the materials **BEFORE** going to my office hours. I am not going to re-lecturing during my office hours since it will waste other students' time.
- (5) Since I will announce important information through class email, you are responsible for checking your Colorado email account.
- (6) According to the university policy, no grades are allowed to be released via email. In other words, I am prohibited from emailing any grade to you.
- (7) Any concern or question about your grades should be raised before the end of the specified date, which will be announced through class email.

**Tentative Course Schedule:**

Week of	Course Material	Topics	Quiz/Exam
8/25	1.1, 1.2, 1.3, 1.4, 1.5	Algebra Basics	
9/1	1.5,1.6	Fractions and Inequalities	Quiz 1 (Friday 9/5)
9/8	1.7, 2.1, 2.2	Simple Equations	
9/15	2,3, 2.4, 2.5	Radicals, Equations in One Variable	Quiz 2 (Friday 9/19)
9/22	Midterm 1	Midterm Review	Midterm 1 (Wednesday 9/24)
9/29	3.1, 3.2, 3.4, 3.5	Summation, Logic	
10/6	3.6, 3.7, 4.1	Set Theory, Induction, Functions of One Variable	Quiz 3 (Friday 10/10)
10/13	4.2, 11.1, 4.3, 4.4	Linear Function, Functions of Two Variables	
10/20	4.5, 4.6, 4.7	Quadratic and Polynomial Functions	Quiz 4 (Friday 10/24)
10/27	4.8, 4.9, 4.10	Power, Exponential, Logarithmic Functions	
11/3	Midterm 2	Midterm Review	Midterm 2 (Wednesday 11/5)
11/10	5.1, 5.2, 5.3	Shifting Graphs, Inverse Functions	
11/17	5.4, 5.5, 5.6	Graphs, Distance, General Function	
11/24	-	Fall Break	
12/1	6.1, 6.2, 6.3	Slope of Curves, Derivative	Quiz 5 (Friday 12/5)
12/8	Final Review	Review for Final Exam	
<b>Final Exam on Monday December 15<sup>th</sup> 4:30-7:00 p.m.</b>			

**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](mailto: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/>

**Expectations of Classroom Behavior:**

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

See policies at

<http://www.colorado.edu/policies/classbehavior.html> and at

[http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student\\_code](http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code)

**Absences:**

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. Please notify me as soon as possible so that the proper arrangements can be made. Students can see full details at [http://www.colorado.edu/policies/fac\\_relig.html](http://www.colorado.edu/policies/fac_relig.html)

**Disabilities Statement:**

If you qualify for accommodations because of a disability, please submit to me 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>. Time extensions for exams must be approved by me prior to the exam. If you have not talked to me personally prior to the exam you will not be granted an extension. Disability Services' letters for students with disabilities indicate legally mandated reasonable accommodations. Other letters/requests you may receive from agencies such as the Wardenburg Student Health Center, or other health providers, such as physicians or counselors, are recommendations you may choose to follow to assist students but are not necessarily legal mandates. The syllabus statements and answers to Frequently Asked Questions can be found at <http://www.colorado.edu/disabilityservices>