ECON 1088-002
Math Tools for Economists II
Fall 2017

Course Meeting: MWF 12-12:50pm, HLMS rm. 241
Instructor: Samara Mendez
Email: samara.mendez@colorado.edu
Office Location: ECON 414 (south tower)
Office Hours: M 11am, W 9am, F 1pm
Website: Desire2Learn, https://learn.colorado.edu/ - *check this site often!!*

Course Description: This class is the second of a two course sequence. It is a continuation of ECON 1078 which builds upon the basic foundation developed in that course. We will study derivatives, optimization, and integrals. These are Chapters 6,7,8,9, and 11 in the textbook. These tools will help you better understand the mathematical framework on which economics models are based and help prepare you for more advanced economics.

Prerequisite: ECON 1078 or equivalent.

Text: *Essential Mathematics for Economic Analysis*, CU Boulder Special Edition
ISBN: 1323259236
Authors: Knut Sydsaeter and Peter Hammond
(3rd or 4th edition are also acceptable!)

Course Policies:

- **General**

  - Class periods will be devoted to lecture and practice, which means that participation is important and will be a decent component of your grade. Participation will be recorded with pre-class questions on D2L or in-class collected questions. I will record attendance for the first two weeks of class, and *if you do not attend the first three class meetings and do not contact me, I will administratively drop you according to departmental procedure.*

  - You will not need a computer during class, unless you feel confident in your ability to type notes that include extensive mathematical notation. If you use a computer for notes, sit in the back three rows to avoid distracting your classmates. Stay off of the internet - you're paying me to teach you math, not to check your messages. No mobile devices are allowed during class periods.

  - Please allow 24 hours for me to respond to your emails. Grades will not be discussed over email. Emails regarding grades will receive a reply of "Office hours."

  - *No makeup assignments will be given.*

- **Grades**

  - **Distribution:**

Pre-test	2%	Midterm	25%	Final Exam	30%
Participation	8%	Midterm	25%	Homework	10%

  - **Reporting:** Grades will be uploaded into D2L as assignments are graded.
  - **Curving:** Midterms may be curved individually, and a curve *may* be applied to the overall course grade to conform to departmental standards.
  - **Letter Grade Cutoffs:**

≥ 93	A	87-89.9	B+	77-79.9	C+	67-69.9	D+	≤ 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-		

  - **Adjustment:** You will be responsible for monitoring your own grades. If you are worried about your grade, come to me early to make a plan for your success. I will automatically increase final course grades that are 0.5% below any grade cuto after any nal grading curve has been applied. After these steps are taken, no further increases to grades will occur. Individual requests for bumps or extra credit assignments will be denied.

- **Practice Problems and Assigned Homework**

  - A pre-test assignment due in the first week of class will check your ability to use prerequisite material. This assignment is graded *only for completion.*
  - Recommended practice problems from your textbook will be posted on D2L each Friday. Detailed solutions will be either covered in class or posted on D2L on the following Wednesday. These problems will not be graded, but they will benefit your exam preparation.
  - Some class periods will be partially "flipped" and will require you to complete a reading or watch a video then answer *unlimited-attempt* questions before attending class. Readings outside of the text and videos as well as pre-class questions will be posted on D2L. Please alert me to any accessibility issues with these materials.
  - Three homework assignments will be due before each midterm. The problems will mirror the types of questions that will be on the exams. Working in groups is encouraged, however each student must turn in an individual assignment with the names of groups members written at the top of the page. *I will randomly choose two problems from each assignment to grade.*

- **Exams**

  - **Midterms:** Three midterms will be given during lecture time on the *fixed* dates in the schedule given in this syllabus. The lowest exam score will be dropped, and therefore no makeup or separate time exams will be given (except for students with documented accommodations). You must notify me with documentation of your accommodation at least one week before the first exam in order for it to apply.

- **Final Exam:** The final exam is cumulative. The exam is held in our regular classroom on Wed. May 4 at 4:30pm. This date is non-negotiable. The only exception to this standard is if you have 3 final exams scheduled on the same day; in this circumstance, you must notify me before the 11th week of the semester.
- *Partial credit will be awarded on all exams.*

University Policies:

- **DISABILITY POLICY** I am committed to providing everyone the support and services needed to participate in this course. If you qualify for accommodations because of a disability, please submit to your instructor a letter from Disability Services in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at dsinfo@colorado.edu.

- **HONOR CODE** 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. Incidents of academic misconduct will 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 myself and non-academic sanctions (including but not limited to university probation, suspension, or expulsion).

- **RELIGIOUS OBSERVATION 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 make arrangements with me no later than the first week of the semester.

- **CODE OF 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 we express opinions. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences or race, culture, religion, politics, sexual orientation, gender variance and nationalities.

- **DISCRIMINATION AND HARASSMENT POLICY** CU Boulder's policy on Discrimination and Harassment can be found on the university website. The policy on Sexual Harassment and on Amorous Relationships applies to all students, staff and faculty. Any student, staff or faculty member who believes s/he has been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status 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 discrimination and harassment resources can be obtained at http://www.colorado.edu/odh.

Tentative Course Outline:
The weekly coverage might change as it depends on the progress of the class. The sections
listed below denote the topics to be covered and their associated textbook sections; however,
I may assign a video or alternate readings instead of the text section. Any material to be
studied before class will be announced in class **and** on D2L.

Week	Content
Aug. 28-Sept. 1	• Topics: Administration, Introducing Derivatives • Sections: 6.1, 6.2, 6.5; **Pre-test due: Sept. 1**
Sept. 4-8	• Topics: Uses of Derivatives; *No Class: Sept. 4 (Labor Day)* • Sections: 6.3, 6.4, 6.6
Sept. 11-15	• Topics: Rules of Derivatives • Sections: 6.7, 6.8
Sept. 18-22	• Topics: More Rules of Derivatives • Sections: 6.9, 6.10, 6.11
Sept. 25-29	• Topics: Review, Using Derivatives; **Midterm 1: Sept. 27** • Sections: Ch 6 review, 7.1; **Homework 1 due: Sept. 25**
Oct. 2-6	• Topics: Using Derivatives • Sections: 7.2, 7.7, 7.8
Oct. 9-13	• Topics: Introduction to Optimization • Sections: 8.1, 8.2, 8.3
Oct. 16-20	• Topics: Tools for Optimization in Economics • Sections: 8.6, 8.7
Oct. 23-27	• Topics: Review, Multivariable Functions; **Midterm 2: Oct. 25** • Sections: Ch. 7/8 review, 11.1, 11.5; **Homework 2 due: Oct. 23**
Oct. 30-Nov. 3	• Topics: Partial Derivatives • Sections: 11.2, 11.6, 11.7
Nov. 6-10	• Topics: Using Multivariable Derivatives, Practice • Sections: 11.8, 14.1
Nov. 13-17	• Topics: Review, Introduction to Integrals; **Midterm 3: Nov. 15** • Sections: Ch. 11 review, 9.1; **Homework 3 due: Nov. 13**
Nov. 20-24	• *No Class: Fall Break*
Nov. 27-Dec. 1	• Topics: Anti-derivatives and Their Interpretations • Sections: 9.1, 9.2, 9.4
Dec. 4-8	• Topics: Definite Integrals • Sections: 9.3. 9.6
Dec. 11-13	• *No Class: Dec. 15*; **Final Exam: Sun., Dec. 17 1:30-4pm** • Sections: Ch. 9, semester review