ECON 1088-002 Syllabus Mathematical Tools for Economists I Spring 2012

Instructor: Xin Geng

Office: Econ 206 **Office Hours:** M & W 9:00-10:30am

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Course Meetings: M, W & F 12-12:50pm CLRE 207

Prerequisite: ECON 1078 or its equivalent

Textbook: Essential Mathematics for Economic Analysis, 3d edition, by Knut Sydsæter and

Peter Hammond, Prentice Hall, 2008.

Websites: Homework will be posted on your Desire2Learn

Past exams are available at:

http://www.colorado.edu/economics/courses/ECON1088/1088home.html

Student Resources are available at: http://www.pearsoned.co.uk/Sydsaeter

CONTENT

This class is the second of a two-course sequence, and a continuation of ECON 1078. You will learn lots of concepts and procedures, like derivatives, optimization, and integrals, in this math course that will be valuable to you in future economics study and hopefully through your whole life. I do hope you can enjoy this process. I am also willing to share any methods or tricks I know so far to show how to make math study an enjoyable experience for you. Beyond this, I hope the tools you learned in this course will help you better understand the mathematical framework on which economic models are based and help prepare you for more advanced economics courses.

Always, as an international instructor, I appreciate constructive, useful suggestions or feedback on any aspect regarding my teaching, language or the class in general, at appropriate times. I will leave time to answer questions for you in class, but there are sometimes questions that are better addressed during office hours.

GRADING

Your grade will consist of three exams, a **cumulative** final exam, homework assignments and in-class team assignments. As one of the **lowest** midterm score can be dropped, I will **NOT** give any make up exams and will **NOT** give early/late exams. Each portion of your grade will be weighted as follows:

Midterm 1: 20% Friday, February 17 Midterm 2: 20% Friday, March 23 Midterm 3: 20% Friday, April 20

Final Exam: 40% Wednesday, May 9 @ 4:30pm

Homework Assignments: 10% Team Assignments: 10% There are tentative five in-class team assignments. They are randomly given through the semester, kind of like a measurement of attendance. I will drop the lowest of the homework grades and the lowest of the team grades. Your grade on the final exam will not be dropped under any circumstances. Homework assignments are due at the beginning of class of the due date. Late assignments will not be given any credit. If you have a conflict (3 or more finals on the same day) let me know as soon as possible, no less than a month before the final exam, so I can make arrangements for a different time for you. Also let me know the first week if you need special accommodations for test taking.

GRADING SCALE

Score	Grade
93-100 %	A
90-92 %	A-
87-89 %	B+
83-86 %	В
80-82 %	B-
77-79 %	C+
73-76 %	С
70-72 %	C-
67-69 %	D+
63-66%	D
60-62 %	D-
Below 60 %	F

ATTENDANCE POLICY

Attendance is not mandatory in this class. However; it is **highly recommended** since mathematical concepts build on prior knowledge. Moreover, I will not re-teach the class in office hours to students that do not go to class, except with doctors' notes of sickness. Nevertheless, I reserve the right to implement a different attendance policy if the attendance to class is too low. Also, please restrain yourselves of using cell phones in class. Laptops are not allowed.

ASSIGNMENTS

Homework and in-class team assignments are where the learning takes place. Each time I will grade only a random subset of the homework (ie—problem 3, 5, 12, ..etc) on correctness, not just the answer, but the process. And the completeness of other questions also counts part of the score(like 5 pts on 1st question, 5 pts on 3rd question, 5 pts on 5th question, 5 pts on the completeness of other questions. Total 20 pts).

Practice makes perfect. This works especially well in studying math. I believe the homework assignments are very important, and encourage you to make sure you get help to understand all the problems, not just the graded ones. Work with your friends from class, see me in office hours, seek help in the economics tutor lab if you need help, but use the problem sets for your learning benefit. An answer without showing the work will be graded zero, so show your work!

TENTATIVE SCHEDULE

Week	Book	Topic	HW/Exam
1/17	6.1, 6.2, 6.3	Slopes, Derivatives, Tangents,	
		Increasing/Decreasing functions	
1/23	6.4, 6.5, 6.6	Rates of Change, Limits	
1/30	6.7, 6.8, 6.9	Sums, Products, Quotients,	HW1
		Chain rule, Higher Order	
2/6	6.10, 6.11	Exponentials, Logarithms	
2/13	Review	Examples	HW2
		MID TERM 1	2/17
2/20	7.1, 7.2, 7.7	Implicit Differentiation, Examples,	
		Elasticities	
2/27	8.1, 8.2, 8.3	Optimization	
3/5	8.6, 8.7	Examples, Local Extrema,	HW3
		Inflection Points	
3/12	11.1, 11.2, 11.3	Functions of Many Variables,	
		Partial Derivatives, Geometry	
3/19	Review	Examples	
		MIDTERM 2	3/23
3/26	-	SPRING BREAK (no classes)	
4/2	11.5, 11.6, 11.7	Many Variables,	HW4
4/9	12.1, 12.2, 12.3,	Comparative Statics, Level Curves	
	12.5	Elaticities	
4/16	13.1, 13.2	Multivariable Optimization,	
	13.3	Local Extreme Points	
		MIDTERM 3	4/20
4/23	Review		HW5
5/9		FINAL EXAM 4:30 PM	

ADDITIONAL NOTES

Disability Policy:

If you qualify for accommodations because of a disability, please submit tome a letter from Disability Services in a timely manner so that your needs maybe addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322.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 semester so we can make 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).

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 they and their students 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. 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.

Discrimination and Harassment Policy:

The University of Colorado at boulder policy on Discrimination and Harassment can be found at http://www.colorado.edu/policies/discrimination.html. The university 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 resources available to assist individuals regarding discrimination or harassment can be obtained at http://www.colorado.edu/odh.