Math Tools for Economists II. ECON 1088, Spring 2015.

Instructor	Amit Patel		
Class Meetings	MWF 1:00-1:50, ECON 117		
Email	ampa8130@colorado.edu		
	This is the best way to contact me. I will try to respond within 24 hours		
	to all emails.		
Office	Econ 313		
Office Hours	TR 12:45PM - 1:45 PM or by appointment.		
Course Website	The course website is accessed through Desire2Learn where you will		
	find all related course materials.		

Course Description and Objectives

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.

Expectations

You can expect me to do my best to help you succeed in this course. I will try my best to answer all questions, provide practice material, provide applications of the material and encourage active thought in the classroom. You may expect me to be respectful and professional at all times by arriving on time, silencing my phone, reserving personal conversation for before and after class, and being courteous with everyone.

I expect you to take the class seriously and to ask questions when something is unclear and actively participate to help us all understand the material better. I also expect you to be respectful and professional at all times by arriving on time, silencing your phone, reserving personal conversation for before and after class, and being courteous with everyone.

Succeeding in a Math class

Math is learned and mastered through practice. Anyone who practices math is capable of doing math well. I will assign practice problems periodically. It is your responsibility to do all of the problems to make sure you are getting sufficient practice with the material. I also recommend reading the book, preferably before class, to supplement the lectures. To encourage practice and completion of homework assignments, there will be several tests in this course.

Textbook

Essential Mathematics for Economic Analysis, 4th edition, by Knut Sydsaeter, and Peter Hammond with Arne Strom is required. Economics 1088 uses the same textbook. This is a very good reference book, which you may use in the future to refresh your knowledge of algebra and calculus.

Calculator Note

As this is a course designed to teach mathematical techniques you will need a calculator that can do basic mathematical functions. These include exponentials, logarithms, radicals, and factorials (log, ln, ex, $n\sqrt{and x!}$). Any basic scientific calculator will perform these functions. Although you may find using a graphing calculator useful in doing some of the homework problems, **NO GRAPHING CALCULATORS, CELL PHONES, OR COMPUTERS WILL BE ALLOWED DURING EXAMS. NON-GRAPHING CALCULATORS ONLY!!!**

Laptop Note

Nothing works better than good, old fashioned paper and pencil for taking notes in a math class. In general, **NO OPEN LAPTOPS ALLOWED or Cell Phones** during lecture. If you have a specific, valid reason for a laptop in class, please speak with me about your situation individually. If I catch you on your cell phone, you will be asked to leave lecture.

Grading

Your grade will come from the following breakdown: 15% Quizzes (Drop Lowest One) 20% Midterm 1 20% Midterm 2 20% Midterm 3 25% Final Exam (Cumulative)

Exams

We will take a total of four exams in this course: three midterms and the final exam. The midterm exams will be held during the normal class time.

Midterms	Midterm 1 – Feb 13 th
	Midterm 2 – Mar 6 th
	Midterm 3 – Apr 10 th
Final	Monday, May 4th 1:30 - 4:00 p.m.

The final exam will be cumulative and cannot be dropped for any reason.

THERE ARE NO MAKEUP EXAMS (see exception for the final below)!!! If you do miss a midterm exam, then the final will be worth 45% of your final grade. However, you must notify me prior to the missed exam.

If you have three or more final exams scheduled on the same day, you are entitled to arrange an alternative exam time for the last exam or exams scheduled on that day. If you have this conflict, arrangements must be made with me no later than Feb. 28th.

Homework

Homework assignments will be assigned regularly throughout the semester. These assignments will not be graded, but they will provide practice for the type of questions you can expect on quizzes and exams.

Quizzes

Quizzes will be given throughout the semester. Some will be announced ahead of time, some will not. I will drop your lowest quiz grade.

Cheating

Anyone caught cheating will at minimum fail the assignment in question and will be referred to the University Honor Code Council. I will determine punishment for cheating instances on an ad hoc basis, but I will not hesitate to give a failing grade for the instance in question, or for the entire course. I will report all instances to the honor code, which will mete out their own punishment, in addition to the one I deem fit. **DON'T CHEAT!**

Week Of	Course Material	Topics	Exam
Jan 12 th	6.1, 6.2, 6.3	Slopes, Tangents, Derivatives	
Jan 19 th	6.4, 6.5	Rates of Changes, Limits	
Jan 26 th	6.6, 6.7, 6.8	Sums, Products, Chain Rules	
Feb 2 nd	6.9, 6.10, 6.11	Higher Order, Exponentials, Logs	
Feb 9 th	Review	Exam	Midterm 1 – Feb 13 th
Feb 16 th	7.1, 7.2, 7.3	Implicit Differentiation, Economic Uses	
Feb 23 rd	7.7, 7.8, 7.9	Elasticities, Continuity, Limits	
Mar 2 nd	7.12, Review	L'Hopital's Rules, Exam	Midterm 2 – Mar 6 th
Mar 9 th	8.1, 8.2, 8.3	Optimization	
Mar 16 th	8.6,8.7, 11.1	Local Extrema, Inflection, Functions	
Mar 23 rd		Spring Break	
Mar 30 th	11.2, 11.3, 11.6	Partial Derivatives, Level Curves	
Apr 6 th	11.7, 11.8, Review	Applications, Exam	Midterm 3 – Apr 8 th
Apr 13 th	9.1, 9.2, 9.3	Integration, Properties	
Apr 20 th	9.4, 9.5, 9.6	Integration Rules	
Apr 27 th	12.1, 12.3, Review	Comparative Statics	

Tentative Schedule

Final Exam on Monday, May 4th from 1:30-4:00 PM

Additional Notes:

Students with Disabilities

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 be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Center for Community N200, and http://www.Colorado.EDU/disabilityservices.

If you have a temporary medical condition or injury, see guidelines at

http://www.colorado.edu/disabilityservices/go.cgi?select=temporary.html.

Disability Services' letters for students with disabilities indicate legally mandated reasonable accommodations. The syllabus statements and answers to Frequently Asked Questions can be found at http://www.colorado.edu/disabilityservices.

Religious Observance Policy

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. If you have a conflict, please contact me at the beginning of the term so that we can make proper arrangements. See full details at http://www.colorado.edu/policies/fac_relig.html.

Classroom Behavior Policy

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 differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity, and gender expression, age, disability, and nationalities.

See policies at http://www.colorado.edu/policies/classbehavior.html and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code.

Discrimination and Harassment Policy

The University of Colorado at Boulder Discrimination and Harassment Policy and Procedures, the University of Colorado Sexual Harassment Policy and Procedures, and the University of Colorado Conflict of Interest in Cases of Amorous Relationships Policy apply to all students, staff, and faculty. Any student, staff, or faculty member who believes s/he has been the subject of sexual harassment or discrimination or harassment based upon race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression or veteran status should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127, or the Office of Student Conduct (OSC) at 303-492-5550. Information about the ODH, the above referenced policies, and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at http://www.colorado.edu/odh.

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; 303-735-2273). 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/.