Math Tools for Economists I
ECON 1078-001, Spring 2013

Instructor            Priti Kalsi
Class Meetings        MWF 12:00-12:50, RAMY N1B23
Email                  priti.kalsi@colorado.edu
This is the best way to contact me. If you do not get a reply within 24 hours, please assume I did not get your email and resend it.

Office                ECON 306
Office Hours           Monday 1:00-2:00 pm, Thursday 10:00-11:00 am.

Course Website        The course website is accessed through Desire2Learn where you will find all related course materials.

Course Description and Objectives
Economics is an extremely mathematical discipline. This course and the following course (ECON 1088) are designed to get all students interested in Economics to get well acquainted with Mathematical tools necessary for success in Economics courses. See tentative schedule for topics covered in this course.

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 to doing math well. I will assign homework daily. It is your responsibility to do all of the homework problems to make sure you are getting sufficient practice with the material. To encourage practice and completion of homework assignments, there will be several quizzes and tests in this course.
Textbook
Essential Mathematics for Economic Analysis, 4th edition, by Knut Sydsater, 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. For my class, you may choose to use the 3rd edition of this textbook and I will try to post HW for both editions, but realize that the following class uses the 4th edition.

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√ 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 OR CELL PHONES WILL BE ALLOWED DURING EXAMS.

Laptop Note
Nothing works better than good old fashion paper and pencil for taking notes in a math class, so it is hard to imagine why anyone would need a computer in this class. In general, NO OPEN LAPTOPS ALLOWED during lecture.

Grading
Your grade will come from the following breakdown:
20% Class Participation
25% Quiz (Drop lowest quiz)
50% 2 Midterms (Drop lowest of Total Quiz grade, Midterm 1 grade or Midterm 2 grade)
30% Final Exam (Cumulative)

NOTE that the grades add up to a total of 125%, but you get to drop the lowest of the two midterms or quiz grades giving a total of 100%.

Class Participation
We will use clickers in this class. Your class participation grade will come from clicker participation. Each clicker question will be worth 2 points. You will earn 1 point for answering the question and 1 point answering the question correctly.

Quizzes
There will be approximately 4 quizzes throughout the semester. These will not be long and you will be given 20-25 minutes to complete the quiz. I will announce quiz dates in advance during lectures. Although no homework is graded, quizzes provide a chance to prove you have done and understood the homework. Quizzes will be questions directly from homework or slight modifications of questions from homework. THERE ARE NO MAKE UP QUIZZES. If you miss a quiz, then it will simply be your lowest score and it will be dropped.
**Exams**
We will take a total of three exams in this course: two midterms and the final exam.

**Midterms**
- Midterm 1: Wednesday, March 13th
- Midterm 2: Wednesday, April 17th

These exams will be held during the normal class time.

**Final**
Saturday, May 4th 7:30 - 10:00 p.m.
The final exam will be cumulative and cannot be dropped for any reason.

**THE EXAM DATES ARE FIXED. THERE ARE NO MAKEUP EXAMS (see exception for the final below)!!!** If you miss a midterm, then it will be the dropped grade from the three grades of midterm 1, midterm 2 and quizzes. Flexible drops are designed to ensure that I will not need to provide a make up.

If you have conflict with the dates above, you may contact me immediately, but I would most likely suggest that you reschedule whatever else it is you have got going on or that you drop the course. NO EXCEPTIONS TO THIS POLICY!

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. To qualify for rescheduling final exam times, you must provide evidence that you have three or more exams on the same day, and arrangements must be made with me no later than the end of the sixth week of the semester (Friday, February 22, 2013).

**Homework**
For each chapter, I will suggest a list of problems from the book that will be good practice for the exams and quizzes. Homework is NOT graded, but note that doing your homework will most definitely improve your quiz grade and your overall grade.

**Tentative Schedule**

<table>
<thead>
<tr>
<th>Week of</th>
<th>Course Material</th>
<th>Topics</th>
<th>Exams</th>
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<tbody>
<tr>
<td>Jan 14th</td>
<td>1.1, 1.2, 1.3</td>
<td>Numbers, Powers, Rules of Algebra</td>
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<tr>
<td>Jan 23rd</td>
<td>1.4, 1.5</td>
<td>No School Jan 21st, Fractions</td>
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<tr>
<td>Jan 28th</td>
<td>1.6, 1.7, 2.1</td>
<td>Inequalities, Intervals &amp; Absolute Values, Simple Equations</td>
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<tr>
<td>Date</td>
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<td>Topics</td>
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<td>Feb 4th</td>
<td>2.2, 2.3, 2.4</td>
<td>Equations continued</td>
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<tr>
<td>Feb 11th</td>
<td>2.5, 3.6, 4.1</td>
<td>Nonlinear equations, Set Theory, Functions</td>
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<td>Feb 18th</td>
<td>4.2, 4.3, 4.4</td>
<td>Graphs of Functions, Linear Functions</td>
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<td>Feb 25th</td>
<td>4.5, 4.6, 4.7</td>
<td>Linear Models, Quadratic Functions, Polynomials</td>
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<td>Mar 4th</td>
<td>4.8, 4.9, 4.10</td>
<td>Power Functions, Exponential Functions, Logarithmic Functions</td>
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<td>Mar 11th</td>
<td>Midterm 1, 5.1</td>
<td>Midterm Review, Shifting Graphs</td>
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<td>Mar 18th</td>
<td>5.2, 5.3, 5.4</td>
<td>New Functions from Old, Inverse Functions, Graphing equations</td>
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<td>Mar 25th</td>
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<td>Spring Break</td>
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<td>Apr 1st</td>
<td>5.5, 5.6, 3.1</td>
<td>Distance in Plane, General Functions Summation Notation</td>
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<td>Apr 8th</td>
<td>3.2, 3.3, 3.4</td>
<td>Rules of Sums, Double Sums, Logic</td>
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<td>Apr 15th</td>
<td>Midterm 2, 15.1</td>
<td>Midterm Review, Systems of Linear Equations</td>
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<tr>
<td>Apr 22nd</td>
<td>15.2, 15.3, 15.4</td>
<td>Matrix Operations, Matrix Multiplication, Rules for Matrix Multiplication</td>
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<tr>
<td>Apr 29th</td>
<td>15.5, 15.6</td>
<td>The Transpose, Gaussian Elimination, Final Review</td>
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Final Exam on Saturday, May 4th 7:30 - 10:00 p.m.

**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.


**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/honorcde/.