# Econ 1078 Spring 2014.

**Instructor** Patrick Gourley

Class Meetings MWF 12:00-12:50, RAMY N1B23 patrick.gourley@colorado.edu

This is the best way to contact me. I will try to respond with 24

hours to all emails.

Office ECON 401

**Office Hours** Monday 1:00PM - 3:00 PM or by appointment.

**Course Website** The course website is accessed through Desire2Learn

"The first lesson of economics is scarcity: there is never enough of anything to fully satisfy all those who want it. The first lesson of politics is to disregard the first lesson."

Thomas Sowell

### **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.

### Succeeding in a Math class

Math is learned and mastered through practice. Anyone who practices math is capable to doing math well. There will be no graded homework in this class, but those who wish to do well in this class should make use of the problems at the end of each section of the textbook. Those that do not do book problems will find it difficult to succeed in this course.

### Textbook

Essential Mathematics for Economic Analysis, 4<sup>th</sup> 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√ and x!). Any basic scientific calculator will perform these functions. NO GRAPHING CALCULATORS, CELL PHONES, OR COMPUTERS WILL BE ALLOWED DURING EXAMS OR QUIZZES. BASIC CALCULATORS ONLY!!!

# **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:

10% Attendance

20% Quizzes (Drop lowest quiz)

40% 2 Midterms

30% Final Exam (Cumulative)

#### Attendance

The following grades correspond to the number of absences over the course of the semester.

| Absences | Grade |  |
|----------|-------|--|
| 0        | 100   |  |
| 1        | 100   |  |
| 2        | 100   |  |
| 3        | 100   |  |
| 4        | 90    |  |
| 5        | 80    |  |
| 6        | 70    |  |
| 7        | 60    |  |
| 8        | 50    |  |
| 9        | 40    |  |
| 10       | 30    |  |
| 11       | 20    |  |
| 12       | 10    |  |
| 13       | 0     |  |

The first three absences do not negatively impact your grade. I do not accept "excused absences". Any absences used due to doctor's visits, club sporting events, etc. will be considered one of the three free absences. DO NOT use up these three free absences for arbitrary reasons.

### Quizzes

There will be 3 quizzes throughout the semester. I will announce quiz dates in advance during lectures. **THERE ARE NO MAKE UP QUIZZES.** If you miss a quiz, then it will simply be your lowest score and it will be dropped.

Midterms Midterm 1 Thursday February 13<sup>th</sup> at 7:00PM Midterm 2 Thursday March 20<sup>th</sup> at 7:00PM

**Final** Wednesday, May 7<sup>th</sup> 1:30-4:00PM

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

# THERE ARE NO MAKEUP EXAMS!!! If you do miss an exam, then the final will be worth 50% of your final grade.

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 21st.

## Cheating

Anyone caught cheating will at minimum fail the assignment in questions and will be referred to the University Honor Code Council.

# (Very) Tentative Schedule

| Week of              | Course Material | Topics                                                         | Exams                                                  |
|----------------------|-----------------|----------------------------------------------------------------|--------------------------------------------------------|
| Jan 13 <sup>th</sup> | 1.1, 1.2, 1.3   | Numbers, Powers, Rules of Algebra                              |                                                        |
| Jan 20 <sup>th</sup> | 1.4, 1.5        | Fractions                                                      |                                                        |
| Jan 27 <sup>th</sup> | 1.6, 1.7, 2.1   | Inequalities, Intervals & Absolute<br>Values, Simple Equations |                                                        |
| Feb 3 <sup>rd</sup>  | 2.2, 2.3, 2.4   | Equations continued                                            |                                                        |
| Feb 10 <sup>th</sup> | 2.5, 4.1, 4.2   | Nonlinear equations, Functions                                 | Exam 1 – 7:00PM Feb<br>13 <sup>th</sup> . Location TBA |
| Feb 17 <sup>th</sup> | 4.3, 4.4, 4.5   | Graphs of Functions, Linear<br>Functions, Linear Models        |                                                        |
| Feb 24 <sup>th</sup> | 4.6, 4.7, 4.8   | Quadratic Functions, Polynomials,<br>Power Functions           |                                                        |
| Mar 3 <sup>rd</sup>  | 4.9, 4.10       | Exponential Functions, Logarithmic Functions                   |                                                        |
| Mar 10 <sup>th</sup> | 5.1, 5.2, 5.3   | Shifting Graphs, New Functions from Old                        |                                                        |
| Mar 17 <sup>th</sup> | 5.4, 5.5        | Inverse Functions, Graphing equations, Distance in the Plane   | Exam 2 – 7:00PM Mar<br>20 <sup>th</sup> . Location TBA |
| Mar 24 <sup>th</sup> |                 | Spring Break                                                   |                                                        |
| Mar 31st             | 5.6, 3.1        | General Functions, Summation<br>Notation                       |                                                        |

| Apr 7 <sup>th</sup>  | 3.2, 3.3 | Rules of Sums, Double Sums |  |
|----------------------|----------|----------------------------|--|
| Apr 14 <sup>th</sup> | 3.4, 3.5 | Logic, Mathematical Proofs |  |
| Apr 21st             | 3.6, 3.7 | Set Theory, Induction      |  |
| Apr 28 <sup>th</sup> | Review   | Review                     |  |

Final Exam on Wednesday, May 7th 1:30-4:00

### **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/.