Economics 4808
Introduction to Mathematical Economics
Fall 2014

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Office Hours: M,W,F 11:00-11:40am; M. 1:00-4:00pm.

Course Description
Econ 4808 is a course that will improve your math skills and will introduce you to how mathematical
tools are applied in economic analysis. The ability to apply mathematics is crucial for economic
analysis. Thus, this course is essential for anyone who wants to pursue graduate work in economics or
a career in economic analysis.

The course covers the mathematics and economic applications of equilibrium, slopes and derivatives,
differentials, optimization (maximizing profit and utility, and minimizing cost), constrained
optimization (e.g., maximizing utility subject to the budget constraint) and integration. Applications
include problems in consumer and producer theory, general equilibrium, and welfare economics.
The course will also somewhat follow the unpublished text written by Professor Edward Morey. The
material is available at: http://www.colorado.edu/Economics/morey/4808/4808read.html

Prerequisites
Principles of Economics, Econ 2010 and Econ 2020, are prerequisites, as are Econ 1078
(Mathematical Tools for Economists 1) and Econ 1088 (Mathematical Tools for Economists 2), or the
equivalent. One or more semesters of Calculus would suffice for Econ 1078 and 1088. Econ 3070 is a
prerequisite, but this course and 3070 are complements so you may be able to take them at the same
time. It is **very** important that you fulfill the prerequisites **before** you take this course, and **still**
understand the materials in the prerequisites. To be successful in mathematical economics, you need
to first be comfortable with algebra and derivatives. If you have any uncertainty as to whether you are
under or over qualified to take the course, please talk to me ASAP.

Class format
The course includes both lectures and problem-solving. In-class problems will be performed both
individually and in groups. The readings for this course will be posted on the course web site
although some of the material for which you are responsible will be presented in lectures only, and is
not explicitly covered in the readings. Review problems will be posted on the course web site.

Policy on Cheating:
If you are found to have violated the honor code (see below), by both the honor code council and
myself, you will automatically fail the course!

Readings
Essential Mathematics for Economic Analysis (by Knut Sydsaeter and Peter Hammond) is the official math text for undergraduate economics majors here at C.U. You are expected to own a copy and understand much of the material in this book. The book is the required text for Econ 1078 and Econ 1088 and students in those courses are told to keep and use the book until they finish their undergraduate major in economics.

Homework
Homework assignments will be posted on the class website. It is a vital part of learning the math concepts we will cover and their applications. Some class time will be set aside to do and go over homework assignments.

In-class Problems
It is important to understand how to apply concepts as we cover them, so you will be required to work on some problems in class (both individually and in groups).

In-class Projects
These cooperative learning exercises are extremely helpful in preparing you to solve more in-depth analytical problems.

Exams: There will be three exams and a cumulative final. These will be given in class on the days listed. No exams will be dropped. To be fair to everybody, I will not answer ANY questions during exams (even about typos) – this puts everyone on equal footing during the exams. Exams (except for the final) are not cumulative, but the material does build on itself so it is important to understand all of the concepts as we go. No makeup exams will be given. If you miss an exam with a valid excuse (e.g. a note from your doctor or Wardenburg), then the weight of your final will be increased. Undocumented illnesses do not count as valid excuses (as long as this is not in conflict with a University policy).   **Note that the exam dates below are <u>not</u> tentative – exams will be given in class on the days listed.   NO EXAMS WILL BE DROPPED!!**

Exam Schedule:
Exam I: Monday, September 29th
Exam II: Monday, October 27th
Exam III: Friday, December 5th
Final exam: Monday, December 15th 10:30-1pm in our usual room.

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 your instructor no later than the end of the sixth week of the semester. **Given the final exam schedule, it is actually not possible that our exam could the third of three on December 15th.**

Attendance Policy
There is no strict attendance policy, but we will do problems in class each day that will count towards your overall grade. If you miss in-class projects it will affect your grade!

Grading

Homework	12%
In-class Problems	8%
In-class Projects	8%
Exam I (Monday 9/29)	17%
Exam II (Monday 10/27)	17%
Exam III (Friday 12/5)	17%
Final Exam (Wed. 12/18 at 4:30pm)	21%

Incompletes, Extra Credit, etc.
I adhere strictly to the University guidelines on Incompletes ("An I is given only when students, *beyond their control*, have been unable to complete course requirements. A substantial amount of work must have been *satisfactorily completed* before approval for such a grade is completed."). Bad grades, unsatisfactory performance, too many credit hours, work conflicts, etc. are not reasons for an incomplete.

I am adamant about giving each student an equal opportunity to perform well in the course, so there will be no extra credit opportunities that are not offered to the entire class. You should focus your efforts on learning the material and doing well on the exams.

Grading Scale:

Your Score	Grade
92% to 100%	A
90% to 91%	A-
88% to 89%	B+
82% to 87%	B
80% to 81%	B-
78% to 79%	C+
72% to 77%	C
70% to 71%	C-
68% to 69%	D+
62% to 67%	D
60% to 61%	D-

Additional Notes:
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). Additional information on the

Honor Code can be found at   http://www.colorado.edu/policies/honor.html and at
http://www.colorado.edu/academics/honorcode

Disabilities
If you qualify for accommodations because of a disability, please submit to your professor a letter
from Disability Services in a timely manner (for exam accommodations provide your letter at least
one week prior to the exam) 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.

If you have a temporary medical condition or injury, see Temporary Injuries under Quick Links at
Disability Services website and discuss your needs with your professor.

Religious holidays
A comprehensive calendar of the religious holidays most commonly observed by CU-Boulder
students can be found at http://www.interfaithcalendar.org/ Review this list and the class syllabus.
After reviewing the syllabus, please see the instructor if you believe that you need an accommodation
for religious reasons. The instructor should be notified within the first two weeks of classes. Campus
policy regarding religious observances states that faculty must make *reasonable* accommodation for
them and in so doing, be careful not to inhibit or penalize those students who are exercising their
rights to religious observance. For more information see
http://www.colorado.edu/policies/fac_relig.html

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

Policy on Discrimination and Harassment
The University of Colorado Boulder (CU-Boulder) is committed to maintaining a positive learning, working,
and living environment. The University of Colorado does not discriminate on the basis of race, color, national
origin, sex, age, disability, creed, religion, sexual orientation, or veteran status in admission and access to, and
treatment and employment in, its educational programs and activities. (Regent Law, Article 10, amended
11/8/2001). CU-Boulder will not tolerate acts of discrimination or harassment based upon Protected Classes or
related retaliation against or by any employee or student. For purposes of this CU-Boulder policy, "Protected
Classes" refers to race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation,
gender identity, gender expression, or veteran status. Individuals who believe they have been discriminated
against 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.