

MATH TOOLS FOR ECONOMISTS II
ECON 1088 - 001
Spring 2012

Instructor: Luis Castro
Time and location: MWF 12:00 - 12:50am @ BESC 185
Prerequisite: ECON 1078 or its equivalent
Textbook: Essential Mathematics for Economic Analysis 3d edition,
by Knut Syds ter and Peter Hammond, Prentice Hall, 2008.
Office: Economics 414
Office Hours: M, W from 10:00 - 12:00 or by appointment
Final Exam: W May 9th from 4:30 - 7:00pm @ BESC 185
Websites: <http://spot.colorado.edu/~castrope/>
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>
Email: Luis.Castropenarrieta@colorado.edu

CONTENT

This class is the second of a two-course sequence, and a continuation of ECON 1078. We will cover topics that include derivatives, optimization, and integrals. These tools will help you better understand the mathematical framework on which economic models are based and help prepare you for more advanced economics courses.

GRADING

Your grade will consist of three exams, a cumulative final exam, homework assignments and in-class team assignments 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: | 19% | Friday, February 17 |
| Midterm 2: | 18% | Friday, March 23 |
| Midterm 3: | 18% | Friday, April 20 |
| Final Exam: | 25% | Wednesday, May 9 @ 4:30pm |
| Homework Assignments: | 10% | |
| Team Assignments: | 10% | |

I will NOT drop any midterm exams. Therefore, it is ~~is~~ **EXTREMELY IMPORTANT** that you don't miss any exams. The only exception will be absences with a valid excuse (proof is needed).

In addition, 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.

TENTATIVE SCHEDULE

| Week | Book | Topic | HW/TA/ 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 | TA 1 |
| 1/30 | 6.7, 6.8, 6.9 | Sums, Products, Quotients, Chain rule, Higher Order | HW 1 |
| 2/6 | 6.10, 6.11 | Exponentials, Logarithms, | TA 2 |
| 2/13 | Review | Examples MIDTERM 1 | HW 2 2/17 |
| 2/20 | 7.1, 7.2, 7.7 | Implicit Differentiation, Examples, Elasticities | |
| 2/27 | 8.1, 8.2, 8.3 | Optimization | TA 3 |
| 3/5 | 8.6, 8.7 | Examples, Local Extrema, Inflection Points | HW 3 |
| 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, | HW 4 |
| 4/9 | 12.1, 12.2, 12.3 | Comparative Statics, Level Curves | |
| | 12.5 | Elasticities | |
| 4/16 | 13.1, 13.2 | Multivariable Optimization | TA 4 |
| | 13.3 | Local Extreme Points MIDTERM 3 | 4/20 |
| 4/23 | 14.1 - 14.3 | Constrained Optimization | |
| | | Lagrange Method | TA 5 |
| 4/30 | Review | | HW 5 |
| 5/9 | | FINAL EXAM 4:30 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 may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, and www.colorado.edu/disabilityservices 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 www.colorado.edu/disabilityservices

Religious Observation 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 term so we can make proper arrangements.

Classroom 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 rea-

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

Discrimination & Harassment Policy

The University of Colorado Policy on Sexual Harassment applies to all students, staff and faculty. Sexual harassment is unwelcome sexual attention. It can involve intimidation, threats, coercion, or promises or create an environment that is hostile or offensive. Harassment may occur between members of the same or opposite gender and between any combinations of members in the campus community: students, faculty, staff, and administrators. Harassment can occur anyy(4sd[(r)-3o)-27