### Economics 4808

**Web:** http://spot.colorado.edu/~mertens

Office Hours: Tues. 10:50-12:15, 3:20-5; Thurs. 10:50-12:15; Friday afternoons by appointment

**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

Prerequisites Principles of Economics

(Econ 2010 and Econ 2020, or Econ 1000) are prerequisites, and so 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. This course and Intermediate Micro Theory are complements. It is

### 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 and Grading**

Homework	12%
In-class Problems	8%
In-class Projects	6%
Exam I (Thursday 2/10)	17%
Exam II (Tuesday 3/15)	17%
Exam III (Thursday 4/21)	17%
Final Exam (Wed. 5/4 at 4:30pm)	23%

There will be three exams and a cumulative final. No exams will be dropped. 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, you will receive a zero. There is one exception to this rule. In the event that you do not take one of the exams, the weight of the final exam may be increased if you are ill and can provide proof (e.g. a letter from the student (n)-2( itself so it i)6(Tue

# Incompletes, Extra Credit, etc.

I adhere strictly to the University guidelines on Incompletes ("An IF 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.

## Grading Scale:

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

Code of Behavior
Students and faculty each have responsibility for maintaining an appropriate learning environment.