Office Hours: M 1:00 ±5:00; W 11:15 ±11:45; and 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 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 The course will also somewhat follow the unpublished text written by Professor Edward Morey.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: <a href="http://www.colorado.edu/Economics/morey/4808/4808read.html">http://www.colorado.edu/Economics/morey/4808/4808read.html</a>

## Prerequisites

<u>Principles of Economics</u> (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. 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 whether you are under or over qualified to take the course, please talk to me ASAP.

# Class format

class problems will be solved 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.

## Readings

Essential Mathematics for Economic Analysis

Homework

Incompletes, Extra Credit, etc. , DGKHUH VWULFWO\ WR WKH 8QLYHUVLW\ JXLGHOLQHV RQ ,QFRF beyond their control

#### **Religious holidays**

A comprehensive calendar of the religious holidays most commonly observed by CU-Boulder students can be found at <u>http://www.interfaithcalendar.org/</u> 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