

Economics 4808  
Introduction to Mathematical Economics  
Spring 2010

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**Office Hours:** T 12:25 – 1:40; W 12 – 2; R 12:25 – 1:40; and 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 **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**

*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 and Grading**

Homework	12%
In-class Problems	8%
In-class Projects	6%
Exam I (Thursday 2/11)	17%
Exam II (Tuesday 3/16)	17%
Exam III (Thursday 4/22)	17%
Final Exam (Sat. 5/1 at 4:30pm)	23%

There will be three exams and a cumulative final. No exams will be dropped. Exams (except for the

**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:*

<b>Your Score</b>	<b>Grade</b>
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+

*Code of Behavior*

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