

ECONOMICS 211
INTRODUCTION TO MATHEMATICAL ECONOMICS
SPRING 2011

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Office Hours: Monday, Tuesday & Thursday, 12:00 pm - 1:30 pm.

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Meetings

The lecture hours are Monday and Wednesday from 2:30 pm to 3:50 pm and will take place in RCH 309. I will be available in my office before class for the scheduled office hours. There will be no lecture on May 23, 2011 due to the celebrations of Victoria Day. If contacting me by e-mail, please, indicate **ECON 211** as the subject of the letter. Due to time constraints I will not reply to questions about the course material via e-mail. Please, note that class attendance is essential for the successful completion of the course.

Course Information

Overview

The course is designed to introduce students of economics to the mathematical tools actively used in economic theory. Topics include an introduction to matrix algebra, differentiation, partial derivatives, and optimization techniques including constrained optimization. Throughout the course the use of these mathematical tools will be shown.

Textbooks

The textbook for the course is *Mathematics for the Economists* by Carl P. Simon & Lawrence Blume. A copy of the text will be placed on a three hour loan at the Dana Porter library.

Course Outline

The presented outline is tentative and is subject to change based on the progress made in the lectures.

1. Review of Notation and Basic Concepts
2. Linear Algebra

- (a) Systems of Linear Equations
 - (b) Matrix Algebra
 - (c) Operations on Matrices
3. Calculus of One Variable
 4. Calculus of Several Variables
 5. Integration
 6. Optimization
 - (a) Unconstrained Optimization
 - (b) Constrained Optimization
 - (c) Necessary and Sufficient Conditions

Evaluation

Grade

The final grade will be determined based on four assignments worth 5% each, one midterm test worth 30%, and a final examination worth 50%. In the case of a significantly better performance on the final examination when compared to the midterm, the grade will be re-weighted with more emphasis on the final. The midterm examination will take place on Monday, June 13, 2011 during the regular class time. The final examination will take place at a time scheduled by the Registrar's Office.

Re-marking

If a student wants a test re-marked he/she must notify the instructor within 5 business days after the marked test has been distributed in class. The test will be re-marked in its entirety and, as a result, the grade can either increase, decrease, or remain unchanged.

Policy on Missed Assignments and Tests

There will be no make-up tests or assignments. Students will receive a mark of zero on a missed assignment or test without the appropriate medical certificate. For students with the relevant medical certificate the weight of the missed test and/or assignments will be shifted to the final examination.

University Rules

Academic Integrity

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility.

Grievance

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4

<http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>

Discipline

A student is expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about rules for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline.

<http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>

Appeals

A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals

<http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm>

Note for Students with Disabilities

The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.