

Economics 546: Game Theory

Fall 2023

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Course Overview

This is an introductory course in game theory meant for advanced undergraduate students. While the course will be largely self contained, we will make use of mathematical tools that will be introduced in class.

Class Schedule

Office Hours

TA Details

Jacob Hazen

Office Hours: TBA.

Prerequisites

Econ 230 or Econ 250. If you have not taken these courses but are interested in taking Econ 546 please get in touch with me (if you have not already).

Textbook

The **recommended** textbook for this course is Martin Osborne, An Introduction to Game Theory. This book, while **not required**, may be useful in providing more examples of the concepts we shall cover, over and above those studied in class. None of the problem sets, lectures or tests will depend on your access to this text.

Exam Dates

Midterm 1 : Oct 5, in class.

Midterm 2 : Nov 7, in class.

Finals : during exam week, to be determined by the University .

Tentative Sequence of Topics

- Strategic Games
- Dominance Arguments
- Nash Equilibrium
- Extensive Games and Subgame Perfection
- Information Sets, Normal Form
- Applications: Bargaining, Commitment and others
- Repeated games and Cooperation

- Mixed Strategy Equilibrium
- Applications: War of Attrition and others
- Bayesian Games
- Extensive Games with Imperfect Information
- Applications: Signalling, Reputation and others
- Introduction to Mechanism Design

Grading

You will be given a number of ungraded problem sets. The solutions to these will be provided to you. While the problem sets do not count towards your final grade, it is very important that you feel comfortable solving them to do well in the exams.

Your final grade will be based on two midterm exams (30% each) and a final exam(40%). If you get a higher proportional score in a later exam it will replace the lower score in the earlier exam(s). For instance if you get 29/30 on the first midterm, 3/30 on the second midterm and 20/40 (=15/30) on the final, your revised scores will be 29/30, 15/30 and 20/40. As a result the midterms are optional. If you do not take a midterm, the score for that midterm will be determined by your score on later exams. There will be no makeup exams.

Regrading

If you have any concerns regarding grading please get in touch with me. Mistakes in tallying scores would be corrected immediately. If you feel that an exam has been graded unfairly please let me know. In such a case you must submit your entire exam for a regrade. Requests to regrade specific questions, however, will not be entertained. **Exams written in pencil will not be regraded.**

Other Important Guidelines

McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/integrity for further information).

According to Senate regulations, instructors are not permitted to make special arrangements for final exams. Please consult the calendar, section 4.7.2.1, General University Information and Regulations, at www.mcgill.ca .

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.