



Rotman Commerce UNIVERSITY OF TORONTO

Course Outline

RSM482H1F

Game Theory for Business Strategy

Fall 2016

Course Meets: Friday / 10 a.m. to noon / WO 25

Instructor: Byung Soo Lee, RT 8018
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Course Scope and Mission

In this course, you will learn about the fundamental tools of game theoretic analysis. The primary goal of the course is to learn how to model interactions of all kinds between multiple individuals as a game. These modeling formalisms may be applicable to a variety of areas: marketing, business, policy, finance, family, persuasion, etc. Through the course project, you will have the opportunity to apply game theory to situations of interest to you from current events. The course also examines how your decision analysis depends on the environment in which you operate: who you interact with, the information you have available, what commitments are enforceable, what alternatives are available to you.

Course Prerequisites

ECO204Y1/ECO206Y1

Required Readings

While most course content will be presented through in-class lectures, supplementary readings (from the following books) will sometimes be posted as PDF files on the course webpage. You do not need to purchase any books for this course.

Games and Information by Eric Rasmusen

A Course on Game Theory by Ariel Rubinstein and Martin Osborne

Evaluation and Grades

Grades are a measure of the performance of a student in individual courses. Each student shall be judged on the basis of how well he or she has command of the course materials.

Work		Due Date
Group Project	40%	November 25
Homework 1	15%	September 30
Homework 2	15%	October 14
Homework 3	15%	October 28
Homework 4	15%	November 11

COURSE FORMAT AND EXPECTATIONS

In-class blackboard lectures will form the core of this course. As such, good note-taking will be important for learning during and after class. You are highly encouraged to take notes by hand. [Scientific evidence](#) suggests that doing so will enhance your ability to absorb the course material.

For Written Assignments:

Please note that clear, concise, and correct writing will be considered in the evaluation of the group project. That is, you may lose points for writing that impedes communication: poor organization, weak paragraph development, excessive wordiness, hard-to-follow sentence structure, spelling mistakes and grammatical errors. Students who require additional support and/or tutoring with respect to their writing skills are encouraged to visit the Academic Success Centre (www.asc.utoronto.ca) or one of the College Writing Centres (www.writing.utoronto.ca/writing-centres). These centres are teaching facilities – not editing services, where trained staff can assist students in developing their academic writing skills. There is no charge for the instruction and support.

For Group Work:

The group requires students to work in teams of 3 to 5. Learning to work together in teams is an important aspect of your education and preparation for your future careers. That said, project-based teamwork is often new to students; to work well in teams, it helps to follow a set of core expectations to best succeed at your team projects.

1. Read the document entitled, “Working in Teams: Guidelines for Rotman Commerce Students” which is available on the RC portal under the Academic Services tab.
2. When working in a team, Rotman Commerce students are expected to:
 - Treat other members with courtesy and respect;
 - Honour the ground rules established by the team;

- Contribute substantially and proportionally to the final project;
- Ensure enough familiarity with the entire contents of the group project/assignment so as to be able to sign off on it as original work;
- Meet the project timeline as established by the team.

3. Resolving conflicts:

Conflicts are part of the team's process of learning how to work together. When handled well, it can generate creativity and bring-multiple perspectives to the solution.

Student teams are expected to work through their misunderstandings as soon as they arise (and prior to submission of the final project). When teams are unable to arrive at a solution that works for all members, the team must meet with the Rotman Commerce Team Coach** as soon as possible. The Coach will listen to the team and help develop options for improving the team process. All members of the project team must commit to, and, utilize their action plans.

**For an appointment with a Rotman Commerce Team Coach, please contact Nouman Ashraf at nouman.ashraf@rotman.utoronto.ca Nouman is highly skilled at facilitating team dynamics and collaboration. Note that the Team Coach's role is to provide guidance, support and advice on team matters – not to formally evaluate or assess teamwork for academic purposes.

Weekly Schedule

Session	Date	Topic
1	September 16	Philosophy of science / mathematical preliminaries
2	September 23	Expected utility
3	September 30	Extensive form games
4	October 7	Extensive form games / Backward induction
5	October 14	Strategic form games
6	October 21	Nash equilibrium / Mixed Strategies
7	October 28	Finitely repeated games / Subgame perfect equilibrium
8	November 4	Infinitely repeated games
9	November 11	Information and knowledge in games
10	November 18	Forward induction and other inferences in games
11	November 25	Presentations
12	December 2	Presentations

POLICY AND PROCEDURE

Missed Tests and Assignments (including midterm examinations)

Students who miss a test or assignment for reasons entirely beyond their control (e.g. illness) may submit a request for special consideration. Provided that notification and documentation are provided in a timely manner, and that the request is subsequently approved, no academic penalty will be applied.

In such cases, students must notify Rotman Commerce on the date of the missed test (or due date in the case of course work) and submit supporting documentation (e.g. [Verification of Student Illness or Injury form](#)) to the Rotman Commerce Program Office within **48 hours** of the originally scheduled test or due date. Students who do not provide Rotman Commerce or the instructor with appropriate or sufficient supporting documentation will be given a grade of 0 (zero) for the missed test or course deliverable.

Note that the physician's report must establish that the patient was examined and diagnosed at the time of illness, not after the fact. Rotman Commerce will not accept a statement that merely confirms a report of illness made by the student and documented by the physician.

If a student is excused from an assignment, the weight of that assignment will be proportionately reweighted among his/her remaining assignments.

Late Assignments

All assignments are due at the beginning of class on the date specified in the course outline. If the assignment is not received on the specified date and at the specified time it will receive a grade of zero.

Students who, for reasons beyond their control, are unable to submit an assignment by its deadline must obtain approval from the instructor for an extension. Supporting documentation will be required as per the policy on missed tests and assignments.

Accessibility Needs

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible: accessibility.services@utoronto.ca or <http://www.accessibility.utoronto.ca/>

Academic Integrity

Academic Integrity is a fundamental value essential to the pursuit of learning and scholarships at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the UofT degree that you earn will continue to be valued and

respected as a true signifier of a student's individual work and academic achievement. As a result, the University treats cases of academic misconduct very seriously.

The University of Toronto's Code of Behaviour on Academic Matters

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm> outlines the behaviours that constitute academic misconduct, the process for addressing academic offences, and the penalties that may be imposed. You are expected to be familiar with the contents of this document. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment (this includes collaborating with others on assignments that are supposed to be completed individually).

On test and exams:

- Using or possessing any unauthorized aid, including a cell phone.
- Looking at someone else's answers
- Misrepresenting your identity.
- Submitting an altered test for re-grading.

Misrepresentation:

- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to), medical notes.

All suspected cases of academic dishonesty will be investigated by the following procedures outlined in the *Code of Behaviour on Academic Matters*. If you have any question about what is or is not permitted in the course, please do not hesitate to contact the course instructor. If you have any questions about appropriate research and citation methods, you are expected to seek out additional information from the instructor or other UofT resources such as College Writing Centres or the Academic Success Centre.

Email

At times, the course instructor may decide to communicate important course information by email. As such, all UofT students are required to have a valid UTmail+ email address. You are responsible for ensuring that your UTmail+ email address is set up AND properly entered on the ROSI system. For more information please visit <http://help.ic.utoronto.ca/category/3/utmail.html>

Forwarding your utoronto.ca email to a Hotmail, Gmail, Yahoo or other type of email account is not advisable. In some cases, messages from utoronto.ca addresses sent to Hotmail, Gmail or

Yahoo accounts are filtered as junk mail, which means that important messages from your course instructor may end up in your spam or junk mail folder.

Blackboard and the Course Page

The online course page for this course is accessed through Blackboard. To access the course page, go to the UofT Portal login at <https://portal.utoronto.ca/> and log in using your UTORid and password. Once you have logged in, look for the My Courses module where you'll find the link to all your course websites. If you don't see the course listed here but you are properly registered for the course in ROSI, wait 48 hours. If the course does not appear, go to the Information Commons Help Desk in Robarts Library, 1st floor, for help, or explore the Portal Information and Help at <http://www.portalinfo.utoronto.ca/content/information-students> and review the Frequently Asked Questions.

Recording Lectures

Lectures and course materials prepared by the instructor are considered by the University to be an instructor's intellectual property covered by the Canadian Copyright Act. Students wishing to record a lecture or other course material in any way are required to ask the instructor's explicit permission, and may not do so unless permission is granted (note: students who have been previously granted permission to record lectures as an accommodation for a disability are, of course, excepted). This includes tape recording, filming, photographing PowerPoint slides, Blackboard materials, etc.

If permission is granted by the instructor (or via Accessibility Services), it is intended for the individual student's own study purposes and does not include permission to "publish" them in anyway. It is absolutely forbidden for a student to publish an instructor's notes to a website or sell them in any other form without formal permission.