Course Outline

RSM 482H1F
Game Theory for Business Strategy
Fall 2017
Course Meets: Friday / 10-12 / WO 30

Instructor:	Byung Soo Lee. RT 8018
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Teaching Assistant:	Zheng Gong

Course Scope and Mission

This course provides a logically rigorous introduction to game theory with an eye toward developing a level of conceptual understanding that would allow one to think about a wide variety of decision problems in game-theoretic terms. We emphasize two aspects of this understanding: descriptive and analytic. One part involves *describing* complex strategic interactions—such as those encountered in business settings—as games at an appropriate level of abstraction depending 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. The other part involves *analyzing* such interactions using game-theoretic ideas (e.g., Nash equilibrium, subgame perfection). Students will demonstrate their mastery of these two parts in the group project at the conclusion of the course.

Course Prerequisites

ECO204Y1/ECO206Y1

Required Readings

Games and Information: An Introduction to Game Theory by Eric Rasmusen. PDFs of relevant chapters will be posted on course webpage. You do not need to purchase this book. It has been released by the author online.

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
Daily Mini Quiz	80%	See Schedule (8×10%)
Group Project	20%	Nov 24

COURSE FORMAT AND EXPECTATIONS

For Written Assignments:
Please note that <u>clear, concise, and correct writing</u> will be considered in the evaluation of coursework. 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 (http://www.studentlife.utoronto.ca/asc) 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 Project requires students to work in teams of 3 (up to 4 if needed due to class size).

The final deliverable is the production of a video presentation that describes and analyzes a business situation covered in the news. A computer with a microphone is required for this project. Free open source software can be used to record the presentation.

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 <u>as soon as they arise </u>(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 s role is to provide guidance, support and advice on team matters – not to formally evaluate or assess teamwork for academic purposes.

Weekly Schedule

* = mini quiz

Session	Date	Topic	Readings
1	Sep 8	Logic and sets	N/A
2	Sep 15*	Strategic-form games	
3	Sep 22*	Extensive-form games	Rasmusen Ch. 1 Rasmusen Ch. 2
4	Sep 29*	Repeated games	Rasmusen Ch. 5
5	Oct 6*	Signaling, adverse selection, and mechanism design	Rasmusen Ch. 9-11 Rasmusen Ch. 13
6	Oct 13*	Solution concepts, Nash equilibrium	Rasmusen Ch. 1 Rasmusen Ch. 2
7	Oct 20*	Backward induction	Rasmusen Ch. 4
8	Oct 27*	Subgame perfect equilibrium	Rasmusen Ch. 4 Rasmusen Ch. 5
9	Nov 3*	Interactive epistemology: Forward induction and iterated deletion	Rasmusen Ch. 1
X	Nov 10	Reading Week	No Class
10	Nov 17	Probability and utility: What are they?	N/A
11	Nov 24	Presentations	
12	Dec 1	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 <u>on the date</u> of the missed test (or due date in the case of course work) and submit supporting documentation (e.g. <u>Verification of Student Illness or Injury form</u>) 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.

Documentation submitted in support of petitions for missing tests and assignments must be original; no faxed or scanned copies will be accepted

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 later report of illness made by the student to a physician.

If proper documentation is provided for a missed mini quiz, the weight of the missed mini quiz will be redistributed among the remaining mini quizzes.

Late Assignments
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. Late assignments will not be accepted without such documentation.

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.studentlife.utoronto.ca/as.

Academic Integrity
Academic Integrity is a fundamental value essential to the pursuit of learning and scholarships at the University of Toronto. Participating honestly, respectively, 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 additional Portal Information for Students at http://portalinfo.utoronto.ca/content/information-students.

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.