

Economics 373 (L01) (Game Theory & Strategic Thinking for Social Sciences)

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Lecture Location: ZOOM Delivery
Lecture Days/Time: MW 12:00 – 14:45

Office: ZOOM Delivery
Office Hours: TR 11:00 – 12:00

Spring 2020

Course Description:

An introduction to the principles of game theory utilizing a non-mathematical and intuitive approach. The principles of strategic thinking are illustrated by application and examples in economics and social sciences.

Course Learning Outcomes:

The objective is to develop the ability of students to reason strategically and to understand how game theory can be used to explain social interaction. By the end of the course students are supposed to be

1. Able to build a model of a strategic situation with simultaneous moves;
2. Able to recognize many of such strategic situations in their lives, and in the environment around;
3. Able to use concept of best response and dominant strategies in equilibrium thinking;
4. Able to assess the equilibrium from the efficiency point of view;
5. Able to model and analyze strategic situation in games where representative player is one of many players of one or few types and apply it to (asymmetric) public goods problems;
6. Able to understand expected utility approach, how to use it and its implication in analysis of the individual attitude toward the risk;
7. Able to build and solve strategic situations where the actions are chosen randomly and use this concept in the equilibrium thinking of evolutionary games;
8. Able to build a model of a strategic situation with sequential moves, analyze subgame perfect equilibrium and assess its optimality;
9. Able to understand how to use credible promises and threats in a clever way of manipulating the world to own advantage and apply it in individual situations, common pool problems, firms positioning strategies;
10. Able to solve repeated “prisoners’ dilemma” type games with not efficient equilibrium, and suggest alternative strategies with credible promises and threats in richer strategy space that would support more efficient outcomes.

Course Outline:

Chapters in following table refer to the Textbook

Dates	Topic	Chapters
May 6, 2020	1. Introduction to games and strategic thinking	1, 2, 3.1 – 3.3, 4
May 11 - 13, 2020	2. Prisoner's dilemma games and Nash equilibrium	4, 5, 11
May 20 – 25, 2020	3. Uncertainty, asymmetric information and credibility	4, 11, appendices 7 and 8
June 1 – 3, 2020	4. Mixed strategies and evolutionary games	4, 7, 8, 12
June 8 – 10, 2020	5. Sequential move games and backward induction	3, 4, 9, 11
June 15 – 17, 2020	6. Repeated games	3, 10

Prerequisites/corequisites:

Economics 201 and 203.

Required Textbook(s):

Dixit, A., Skeath, S., and Reiley, D. (2015). Games of Strategy. 4th Edition. WW Norton

Online Delivery:

This course will be delivered online. Students are expected to be able to participate online in accordance with this Course Outline. Lectures, assignments, office hours, exams, readings and other course material, etc. all require online access and this access is the responsibility of the student.

Desire2Learn:

This course will make use of the Desire2Learn (D2L) platform. Students who are registered in the course can log on at <http://d2l.ucalgary.ca> through their student centre. Please note that D2L features a class e-mail list that may be used to distribute course-related information. These e-mails go to your University of Calgary e-mail addresses only.

Lectures:

Lectures will be delivered online at the Registrar scheduled times and delivered using ZOOM. The lectures will be recorded and subsequently posted to D2L.

Grade Determination and Final Examination Details:

TWO ASSIGNMENTS, 15% each, due May 20 and June 17	30%
MIDTERM EXAM on May 27	30%
FINAL EXAMINATION	40%
	<hr/>
	100%

The official grading system will be used. See <http://www.ucalgary.ca/pubs/calendar/current/f-1-1.html>.

A passing grade on any particular component of the course is not required for a student to pass the course as a whole.

If a student's letter grade on the final exam exceeds their midterm(s) letter grade, the weight of the midterm(s) is (are) transferred to the final exam. The student must have written the midterm(s) or provided supporting documentation for the absence(s) such as a medical note or statutory declaration.

As per the Writing Across the Curriculum Statement in the Calendar, writing and grading thereof will be a factor in the evaluation of student work. [See https://www.ucalgary.ca/pubs/calendar/current/e-2.html](https://www.ucalgary.ca/pubs/calendar/current/e-2.html).

The final examination will be an open-book, take-home exam. The exam will be available on D2L 24 hours before the end of the Registrar's scheduled final exam time. Students will hand in their exam in pdf format on D2L prior to the end of the scheduled completion time of their final exam using DropBox. The exam is intended to be completed in 2 hours. Students will have four hours to complete the exam, at the time of their choosing, within the 24 hour period.

The midterm exam(s) will be an open-book, take-home exam(s). The exam(s) will be available on D2L. Students will download the exam from D2L, complete the exam, scan it, and submit using Dropbox in D2L. Students will have three hours to complete the exam, at the time of their choosing, within a designated 24 hour period. The exam is intended to be completed in 75 minutes.

All other course components will also be accessed, submitted, and returned through D2L.

If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam <https://www.ucalgary.ca/pubs/calendar/current/g-6.html>. Under no circumstance will this be accommodated by the Department.

Tests and exams **WILL NOT** involve multiple choice questions.

THERE WILL BE NO MAKEUP OR DEFERRED QUIZZES/TESTS/EXAMS under any circumstances, nor may the quizzes/tests/exams be written early. Students unable to write the quizzes/tests/exams because of documented illness, family emergency, religious observance, or university-sanctioned event will have the weight shifted to the final examination; otherwise a grade of zero will be assigned.

Reappraisal of Grades and Intellectual Honesty:

For Reappraisal of Graded Term Work, see Calendar I.2

<http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

For Reappraisal of Final Grade, see Calendar I.3

<http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

Statement of Intellectual Honesty, see Calendar K.4

<http://www.ucalgary.ca/pubs/calendar/current/k-4.html>

Plagiarism and Other Academic Misconduct, see Calendar K.5

<http://www.ucalgary.ca/pubs/calendar/current/k-5.html>

Academic Accommodations:

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services. SAS will process the request and issue letters of accommodation to instructors. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor. The full policy on Student Accommodations is available at <http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf>.

Freedom of Information and Protection of Privacy (FOIP) Act:

Personal information is collected in accordance with FOIP. Assignments can only be returned to the student and will be accessible only to authorized faculty and staff. For more information, see <http://www.ucalgary.ca/legalservices/files/legalservices/faq-students.pdf> and http://www.ucalgary.ca/legalservices/files/legalservices/faq-faculty_0.pdf.

Copyright Legislation:

See the University of Calgary policy on Acceptable Use of Material Protected by Copyright at www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf. Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

Recording of Lectures:

Recording of lectures is prohibited, except for audio recordings authorized as an accommodation by SAS or an audio recording for individual private study and only with the written permission of the instructor. Any unauthorized electronic or mechanical recording of lectures, their transcription, copying, or distribution, constitutes academic misconduct. See <https://www.ucalgary.ca/pubs/calendar/current/e-6.html>.

Important Dates:

Please check: <http://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html>.

Student Organizations:

Faculty of Arts Students' Association (F.A.S.A.):

Economics Department Representative

E-mail: econrep@fasaucalgary.ca and Web: www.fasaucalgary.ca.

Society of Undergraduates in Economics:

<https://www.ucalgarysue.com/>.

Society of Undergraduates in Economics is a student run organization whose main purpose is to assist undergraduate economics students to succeed both academically and socially at the University of Calgary. Services include access to the exam bank, career events such as Industry Night and information sessions, mentorship programs, and social events for members. They invite you to join by contacting SUE at societyofundergradsineconomics@gmail.com.

Faculty of Arts Program Advising and Student Information Resources:

- Have a question, but not sure where to start? The Arts Students' Centre is your information resource for everything in Arts! Call them at 403-220-3580, or email them at artsads@ucalgary.ca. You can also visit the Faculty of Arts website at <http://arts.ucalgary.ca/undergraduate>, which has detailed information on common academic concerns, including program planning and advice.
- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at 403-210-ROCK [7625].

Student Support and Resources:

- See <https://www.ucalgary.ca/registrar/registration/course-outlines> for information on campus mental health resources, the Student Ombuds' Office, Student Success Centre, Safewalk, and Emergency Evacuation and Assembly.
- Online writing resources are available at <https://ucalgary.ca/student-services/student-success/writing-support>.

Note:

Students are responsible for all assigned material, e.g., supplementary material posted on D2L, regardless of whether or not the material was covered in class.

ASC

2020-04-27