

**University of Waterloo**  
**Department of Economics**  
**ECON 392**  
**Strategic Situations and Welfare Economics**  
**Winter 2021**  
**Remote Delivery**

**Instructor Information**

Instructor: Phil Curry  
Office Hours: Via the LEARN Discussion Forum  
Email: pacurry@uwaterloo.ca

**Course Description**

Many economic decisions are made in circumstances where there are no competitive markets. This course introduces students to individual and group choice in such settings. It covers how to model such settings as "games" in both the extensive and strategic form, and introduces the key equilibrium concepts associated with these models. An introduction to considerations in group decision making via cooperative game theory and welfare economics is provided in the last part of the course.

**Course Goals and Learning Outcomes**

This course is a required course for those students doing the Intensive Specialization. As such, we will be developing the mathematical foundations of game theory and social choice. Strong mathematical skills are required.

**Recommended Text**

- Osborne, Martin J., An Introduction to Game Theory, New York: Oxford University Press, 2004.

Note that this text is recommended, not required. The course material will follow along with the text somewhat, but will be presented quite differently. Note that this text does not cover all of the material on welfare economics. I see that this text is available as an e-book for Kindle through Amazon. Other texts on game theory would also be useful.

**Course Requirements and Assessment**

	Date of Evaluation (if known)	Weighting
Assessment		
Assignment 1	Jan 29	10%
Assignment 2	Feb 12	10%
Assignment 3	Mar 23	10%
Assignment 4	Apr 6	10%
Written Assignment 1	Mar 5	30%
Written Assignment 2	Apr 20	30%
Total		100%

## Assignments

For your assignments, you will be asked to solve mathematical problems based on the material covered. The marking scheme will be as follows. Each question (or subquestion) is worth 1 mark. If you get the answer correct, you get 1 mark. If you get the answer incorrect, you get 0.5 marks. If you do not attempt the question, you get 0 marks.

## Written Assignments

There will also be two written assignments, in which you take the material you have learned and apply it to everyday life. These assignments are not intended to involve researching the academic literature – you are meant to simply give your own thoughts. Referencing other work is not only unnecessary, it is actively discouraged. Your grade will depend both on the content and your writing style. Turnitin will be used when grading these assignments.

## Course Material and Office Hours

I will be releasing course notes on the material below in two-week segments. Questions should be asked on the appropriate Discussion Forum on LEARN, which I will monitor frequently. I can arrange private calls upon request. If a particular question is difficult to answer in the forum, I am willing to record a short video or come up with a slideshow to help answer the question. Please be respectful to one another at all times in the forum.

## Course Outline

Week	Date	Topic	Readings Available
1	Jan 11 - 15	Introduction	Sept 8
2	Jan 18 – 22	Solution Concepts - Dominance	Sept 8
3	Jan 25 - 29	Solution Concepts – Nash Equilibrium	Sept 21
4	Feb 1 - 5	Mixed Strategies	Sept 21
5	Feb 8 - 12	Continuous Action Spaces	Oct 5
6	Feb 22 - 26	Number of Equilibria	Oct 5
7	Mar 1 - 5	Extensive Form	Oct 26
8	Mar 8 - 12	Perfect Information	Oct 26
9	Mar 17 - 23	Imperfect Information	Nov 9
10	Mar 24 - 30	Mixed Strategies, Continuous Action Space	Nov 9
11	Mar 31 – Apr 6	Social Choice	Nov 23
12	Apr 7 - 14	Nash Bargaining	Nov 23

## Late Work

Assignments and written assignments are due in the dropbox on LEARN on the due date given. Late work will be assessed a 25% penalty per day. Please make sure your assignments are submitted as a single file with the pages in the correct order.

## [Economics Department Deferred Final Exam Policy](#)

### **Cross-listed course**

Please note that a cross-listed course will count in all respective averages no matter under which rubric it has been taken. For example, a PHIL/PSCI cross-list will count in a Philosophy major average, even if the course was taken under the Political Science rubric.

### **Academic Integrity**

**Academic Integrity:** In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility. See the [UWaterloo Academic Integrity](#) webpage and the [Arts Academic Integrity](#) webpage for more information.

**Discipline:** A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (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](#). For typical penalties check [Guidelines for the Assessment of Penalties](#).

**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. When in doubt, please be certain to contact the department’s administrative assistant who will provide further assistance.

**Appeals:** A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 - Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to [Policy 72 - Student Appeals](#).

### **Accommodation for Students with Disabilities**

**Note for students with disabilities:** [The AccessAbility Services office](#), located on the first floor of the Needles Hall extension (1401), 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 AS office at the beginning of each academic term.

**Turnitin.com:** Text matching software (Turnitin®) will be used to screen assignments in this course. This is being done to verify that use of all material and sources in assignments is documented. Students will be given an option if they do not want to have their assignment screened by Turnitin®. In the first week of the term, details will be provided about arrangements and alternatives for the use of Turnitin® in this course.

Note: students must be given a reasonable option if they do not want to have their assignment screened by Turnitin®. See [guidelines for instructors](#) for more information.

## **Mental Health Support**

All of us need a support system. The faculty and staff in Arts encourage students to seek out mental health supports if they are needed.

### **On Campus**

- Counselling Services: [counselling.services@uwaterloo.ca](mailto:counselling.services@uwaterloo.ca) / 519-888-4567 ext 32655
- [MATES](#): one-to-one peer support program offered by Federation of Students (FEDS) and Counselling Services
- Health Services Emergency service: located across the creek from Student Life Centre

### **Off campus, 24/7**

- [Good2Talk](#): Free confidential help line for post-secondary students. Phone: 1-866-925-5454
- Grand River Hospital: Emergency care for mental health crisis. Phone: 519-749-433 ext. 6880
- [Here 24/7](#): Mental Health and Crisis Service Team. Phone: 1-844-437-3247
- [OK2BME](#): set of support services for lesbian, gay, bisexual, transgender or questioning teens in Waterloo. Phone: 519-884-0000 extension 213

Full details can be found online at the Faculty of ARTS [website](#)

Download [UWaterloo and regional mental health resources \(PDF\)](#)

Download the [WatSafe](#) app to your phone to quickly access mental health support information

## **Territorial Acknowledgement**

We acknowledge that we are living and working on the traditional territory of the Attawandaron (also known as Neutral), Anishinaabeg and Haudenosaunee peoples. The University of Waterloo is situated on the Haldimand Tract, the land promised to the Six Nations that includes six miles on each side of the Grand River.