

ECON 491, Advanced Microeconomics

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Fall 2019, Waterloo

- **Lectures:** MW 11h30-12h50, PAS1241. First class is Wednesday September 4, final class is Monday December 2.
- **Office Hours:** Fridays 12h00-13h30.
Office hours are the appropriate venue for asking questions about the material from the course. Email is an ineffective method for communicating course content, and I will not respond to detailed questions regarding the material other than during class or office hours.
- **Textbook:** There is no required textbook for this class, and my lectures will be based on my own notes. Students are responsible for obtaining notes for lectures that they do not attend. The topics from class are typically covered by standard textbooks on game theory.
- **Course Materials on D2L:** I will post class announcements, assignments and other relevant material on the [Desire2Learn](#) network. Students are responsible for staying updated with the material posted on D2L.
- **Topics:** From the university calendar: This course prepares students for graduate-level theory courses. Students will be exposed to a selection of topics treated with the mathematical rigour required for graduate work.

For my part, I thought it best not to replicate a standard M.A. theory course, but instead to introduce students to important topics that are often dropped because of lack of time in graduate classes, while covering them at a level that approaches the graduate level. Specifically, the course will focus on using the tools of economic theory to study cooperation. In the first part of the class, we will study cooperation in standard (“noncooperative”) games, where we will focus on how introducing communication can expand the set of equilibrium outcomes of these games. In the second part of the class, we will study cooperative games,

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a different approach to game theory which builds in the possibility for communication and coordination between the players at the outset.

- i. Communication in games.
 - (a) Review: Noncooperative games and Nash equilibria.
 - (b) Correlated Nash equilibrium.
- ii. Cooperative games.
 - (a) Games in coalitional form.
 - (b) Solution concepts: the core, von Neumann-Morgenstern stable sets, the Shapley Value.

- **Evaluation:** There will be five assignments, two midterms and a final exam.

- i. Assignments are worth 10% of the final grade, and their aim is to help you integrate the material from class and prepare you for the exams. Teamwork is expected (and to some degree recommended), although each student must hand in their own assignment. Assignments are to be handed in during class, and the due dates for all assignments will be announced on D2L.
- ii. Each midterm is held during class hours and is worth 20% of the final grade. The first midterm will take place on Wednesday October 2, and the second midterm will take place on Wednesday November 6. The subjects covered by the midterms will be specified in class prior to the test.
- iii. The final exam is worth 50% of the final grade. The material on the final is cumulative.

- **Policy on Missed/Late Assignments and Tests:** Any assignment that is not handed in to me during the lecture at which this assignment is due will not be marked and will receive a grade of zero. If you miss that lecture due to illness and therefore cannot hand in your assignment, a relevant medical certificate is required to shift the weight of the assignment to the final exam. No make-up tests will be provided for the midterm exams. Students who miss a midterm and do not have a relevant medical certificate will receive a mark of zero. Students with a valid medical certificate will have the weight of the relevant midterm shifted to their final exam. If a student misses the final exam, the resulting procedure is outlined in the Economics department's [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:** 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 offense, or who needs help in learning how to avoid offenses (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](#).
- **Note for students with disabilities:** The [AccessAbility Services \(AS\) 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.