ADVANCED MICROECONOMIC THEORY I ECONOMICS 3382B-001

Department of Economics Western University January 2025

Instructor: Peter Streufert

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Office hours: W 10am-2pm (ET, via Zoom)

Course website: https://westernu.brightspace.com/

Delivery mode: In person

Meeting time and place: Tu 9:30-11:30am, Th 9:30-10:30am, FNB1240

Undergraduate Inquiries: 519-661-3507, 4078 Social Science, econugrd@uwo.ca

Registration:

You are responsible for ensuring you are registered in the correct courses. If you are not registered in this course, the Department will not release any of your marks until your registration is corrected. You may check your timetable by using the Login on the Student Services website at https://student.uwo.ca. If you notice a problem, please contact your home Faculty Academic Counsellor immediately.

Prerequisite Note:

The prerequisites for this course are [1] Economics 2261A/B and [2] Economics 2210A/B. Economics 2210 can be replaced by the combination of Mathematics 1600 (formerly Linear Algebra 1600A/B) and Calculus 1501A/B (which can be replaced by Calculus 1301A/B with a mark of 85 or above). An antirequisite is Economics 3381A/B.

You are responsible for ensuring that you have successfully completed all course prerequisites, and that you have not taken any antirequisite courses. Lack of prerequisites may not be used as a basis for appeal. If you are found to be ineligible for a course, you may be removed from it at any time and you will receive no adjustment to your fees. This decision cannot be appealed.

If you find that you do not have the course prerequisites, it is in your best interest to drop the course well before the end of the add/drop period. Your prompt attention to this matter will not only help protect your academic record, but will ensure that spaces become available for students who require the course in question for graduation.

Course Description:

The university's academic calendar states that the course concerns "theories of expected utility and uncertainty, and game theory". About 80% of the course will concern game theory.

Course Learning Outcomes:

Students will have the opportunity

- 1. To gain a basic understanding of how economists (a) use decision problems to model rationality in the presence of uncertainty, and (b) use games to model strategic interaction among rational agents.
- 2. To apply this understanding to model numerous examples of real-life economic and social situations which involve strategic interactions.
- 3. To identify the strengths and weaknesses of game-theoretic modeling.
- 4. To prepare for applied courses using game theory, and for using game theory in their own senior thesis projects.

Textbook:

B. The textbook is Steven Tadelis, 2013, *Game Theory: An Introduction*. This book is available from Princeton University Press (for USD 75), and also from the university bookstore. The book has only one edition, so a used copy is just as useful as a new copy. (The publisher maintains a <u>website</u> for the book, and also provides a <u>solution manual</u> for selected exercises from the book.)

Technical Requirements:

- C. Students are required to have a computer with a camera, a microphone, and a stable internet connection. This equipment is needed for the following purposes: (1) to access the resources and announcements on OWL, (2) to participate in office hours on Zoom, and (3) to be prepared for unexpected contingencies.
- D. Access to OWL and Zoom resources will be restricted to students with UWO credentials. This is typically done by means of students' UWO email addresses (@uwo.ca or @ivey.ca). For technical support, see the OWL Help page or contact Western Technology Services. Google Chrome and Mozilla Firefox are the preferred browsers for OWL (please update your browser frequently).

Assignments and Marking:

- E. There will be four problem sets, due at the end of class on January 23, February 18, March 13, and April 1. The deadlines are firm. Answers should be submitted physically on paper (rather than virtually by email). Finally, students may work in groups, but each student must hand in their own answers and report the names of the students in their group.
- F. There will be two exams. The midterm will be 90 minutes long and take the place of the lecture on February 25 (tentatively). Students will NOT be allowed to self-attest for their absence from the midterm. The final will be 2 hours long, at a time and place to be determined by the registrar.
- G. The course mark will be determined by putting a weight of 5% on the best problem set, 5% on the second-best problem set, 35% on the midterm, 50% on the final, and 5% on the best of (a) the third-best problem set, (b) the midterm, and (c) the final.
- H. Although some examination questions will resemble homework problems, students should not expect that all examination questions will resemble homework problems. Further, relatively little information about the format of the examinations will be given prior to the examinations.

I. As with any course, it is impossible for this course's instructor to perfectly predict the difficulty of examination questions. Because of this, students should not expect that the course mark will equal the average percentage of correctly answered examination questions. Rather, systematic adjustments to such percentages will occur.

Provisions for Fairness:

- J. Full examination instructions will be made known as the examinations approach. However, two rules can be expected. (a) During examinations, students may not use any books, or notes, or cell phones, or electronic dictionaries, or any device with graphing or programming capabilities. Cheap calculators will be the only devices allowed. (b) During examinations, students may not communicate about exam content with any person other than the instructor. This implies that students may not talk with the proctors about the exam content.
- K. University policy on academic considerations is described <u>here</u>. Within that document, please be especially sure to read parts 1-4 in the Policy section. Note that any academic considerations granted in this course will be determined by the instructor, in consultation with the academic advisors in your Faculty of Registration, in accordance with information presented in this course outline.
- L. There are no make-up midterm exams. Rather, an excused midterm's weight will be shifted to the final exam.
- M. If a student misses the final exam, University and Economics Department policies require that they (a) request academic consideration from the counselors and (b) contact the instructor, both within 48 hours. Failure to do so will typically invalidate any excuse in all but extreme circumstances. Make-up final exams will be scheduled by the instructor. (Note that Paragraph K also applies to make-up final exams.)
- N. Students who have been excused from the midterm may find that their final exam differs in form and/or content from the final exam given to students who have written the midterm. For example, a student who has not written the midterm may find that their final exam has more questions concerning the material that would have been tested on the unwritten midterm. Or, for another example, a student writing a make-up final exam may find that their final exam has questions on different topics than those tested in the regularly scheduled final exam, and that those questions need to be answered by essay rather than short-answer or multiple-choice. Such alterations are not intended to change the expected difficulty of the exams.

Tentative Schedule:

- O. The readings below are tentative and incomplete (please see the OWL site for the actual readings as the term progresses). The midterm should find us at approximately the start of Part 3. Chapters in parentheses might not be reached.
- Part 1. Rational Decision Making. Chapters 1, 2
- Part 2. Static Games of Complete Information. Chapters 3, 4, 5, 6
- Part 3. Dynamic Games of Complete Information. Chapters 7, 8, 9, 10, (11)
- Part 4. Static Games of Incomplete Information. Chapters 12, (13)
- Part 5. Dynamic Games of Incomplete Information. Chapters 15, (16)

Privacy, Copyright, Conduct:

- P. Students may not record office hours or any other online session. This is to protect the privacy of the other students.
- Q. All course materials are protected by copyright law. Thus a student may not reproduce (or allow others to reproduce) any of the course materials, unless it for the student's own educational purposes.
- R. Students are expected to follow the Student Code of Conduct.

1PLEASE NOTE DEPARTMENT & UNIVERSITY POLICIES FOR WINTER 2025

The University expects all students to take responsibility for their own Academic Programs. Students should also check their registration to ensure they are enrolled in the correct courses.

- 1. Guidelines, policies, and your academic rights and responsibilities are posted online in the current Western Academic Calendar at: http://westerncalendar.uwo.ca. Claiming that "you didn't know what to do" is not an acceptable excuse for not following the stated policies and procedures.
- 2. A <u>new academic consideration and flexibility in assessment</u> policy is in effect starting September 2024. Students can miss one assessment per course per term without medical documentation. Faculty can designate one assessment per course for which students *cannot* self-attest.
- 3. Students must familiarize themselves with the "Rules of Conduct for Examinations" http://www.uwo.ca/univsec/pdf/academic_policies/exam/administration.pdf.
- 4. Cheating as an academic offence: Students are responsible for understanding what it means to "cheat." The Department of Economics treats cheating incidents very seriously and will investigate any suspect behavior. Students found guilty will incur penalties that could include a failing grade or being barred from future registration in other Economics courses or programs. The University may impose further penalties such as suspension or expulsion.
- 5. **Plagiarism:** Students must write their essays and assignments in their own words. When taking an idea/passage from another author, it must be acknowledged with quotation marks where appropriate and referenced with footnotes or citations. Plagiarism is an academic offence (see Scholastic Discipline for Undergraduate Students in the Western Calendar at http://westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_20).

Western University uses software to check for plagiarism and students may be required to electronically submit their work. Those found guilty will be penalized as noted in point 4.

- 6. It is a Department of Economics policy that **NO** assignments be dated, stamped or accepted by staff. Students must submit assignments to the instructor.
- 7. **Appeals**: University policies and procedures for appealing a mark can be found in the Student Academic Appeals section in the current Western Academic Calendar at: http://westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page 14. Please note the relevant deadlines.

Department of Economics procedures for appealing a mark can be found here: https://economics.uwo.ca/undergraduate/program_counselling/responsibilities_policies.html#appea_ls. The Department will not consider an appeal unless an attempt has been made to settle the matter with the instructor first. Students who remain dissatisfied with the outcome may proceed to submit an appeal to econugrd@uwo.ca. Please follow the instructions and use the appeal form shown in the above link.

8. Systematic adjustments of a class grade distribution (either up or down) can occur in Economics courses. The fact that grades have been adjusted is **not** grounds for an appeal.

9. ADD AND DROP DEADLINES:

- Deadline to **ADD** second term full or half course: **January 14, 2025**
- Deadline to **DROP** second term full or half course March 31, 2025

Policy Regarding Makeup Tests and Final Examinations

Faculty of Social Science policy states that oversleeping or misreading an exam schedule is NOT grounds for a makeup. This rule applies to midterm and final exams in the Department of Economics.

Policies Regarding Academic Accommodation

- Academic accommodation will not be granted automatically on request. Students must demonstrate by documentation that there are compelling medical or compassionate grounds before academic accommodation will be considered. The Faculty of Social Science's policies on academic accommodation are found at https://counselling.ssc.uwo.ca/procedures/academic consideration.html
- Accommodation for Students with Disabilities: Students with disabilities or accessibility challenges should work with Accessible Education (formerly SSD, see http://academicsupport.uwo.ca/accessible education/index.html), which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The accommodation policy can be found here: Accommodation for Students with Disabilities.
- Rewriting Exams and Retroactive Reweighting are NOT Permitted: Students who proceed
 to write a test or examination must be prepared to accept the mark. Rewriting tests or
 examinations, or retroactive reweighting of marks, is not permitted. Students must also book
 travel arrangements AFTER final exam dates have been posted as they must not conflict with
 test or final exams.
- Unless medically incapable of doing so, students must notify their instructor prior to the test

date or at least within **48 hours** when requesting a makeup exam. Failure to follow this procedure may result in denial of academic accommodation and a grade of zero. Students should also set up an appointment as soon as possible to meet with their instructor. If the instructor is not available, send an email message to the instructor, copying the Undergraduate Coordinator at econugrd@uwo.ca. **Notifying instructors of a missed exam does not automatically entitle students to a makeup**.

- For medical illnesses, students may consult Student Health Services and request a Student Medical Certificate from the physician. If assessed by an off-campus doctor, students must obtain a certificate from his/her office at the time of the visit/assessment. Student Medical Certificate (SMC) is available here:
 - https://www.uwo.ca/univsec/pdf/academic policies/appeals/medical certificate.pdf
- **Documentation for Accommodation:** Individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds or for other reasons.
- Western University policy on Consideration for Student Absence is available here: https://counselling.ssc.uwo.ca/procedures/academic consideration.html
- Religious Accommodation: Students should consult the University's list of recognized religious holidays and should give <u>reasonable notice in writing, prior to the holiday</u>, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the 2024 Diversity Calendar available at https://www.edi.uwo.ca/ (see bottom right of page).

Policy Regarding Class Attendance and Engagement: If the instructor deems a student's attendance or engagement in the class to be unsatisfactory, that student may be prohibited from writing the final examination. Examples of unsatisfactory class engagement include frequent absences from an inperson or synchronous online class, lack of assignment submissions, and inadequate use of online course materials. Instructors who intend to make use of this policy will notify the student in advance.

Statement on Gender-Based and Sexual Violence: Western is committed to reducing incidents of gender-based and sexual violence (GBSV) and providing compassionate support to anyone who is going through or has gone through these traumatic events. If you are experiencing or have experienced GBSV (either recently or in the past), you will find information about support services for survivors, including emergency contacts at the following website: <u>Get Help</u>. To connect with a case manager or set up an appointment, please contact <u>support@uwo.ca</u>.

Statement on Mental Health and Support Services: Students who are in emotional/mental distress should refer to Mental Health@Western http://www.uwo.ca/uwocom/mentalhealth/ for a complete list of options about how to obtain help.

Statement on Remote Proctoring: While Western intends to hold most classes, mid-terms and finals in-person, the London-Middlesex Health unity may require western to teach in a remote format. If this occurs, all assessments will be done remotely and may involve the use of remote proctoring software (i.e., Proctorio, ProctorTrack). Instructors will provide information on the details should the need arise.