Game Theory Syllabus

Department of Economics, College of Liberal Arts, Temple University
Spring 2022: ECON 3519 Section 001 CRN 46196, 3 credit hours
Instructor: Dr. Dimitrios Diamantaras, Associate Professor of Economics
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Meets in person Monday 5:30-8:00 pm in Mazur 105

Course Description

Game theory is a fundamental tool to analyze economic and social interactions. It has been widely used in economics, management science, sociology, political science, computer science, biology, and other areas. In this course, you will study essential concepts in game theory, such as strategic/extensive form and Nash/subgame perfect equilibrium, and master their application to various situations in economics, business, society, and daily life.
Pre-requisites: Minimum grade of C- in (ECON 1102 or ECON 1902) and (ECON 1101, ECON 1901, MATH 1042, MATH 1942, MATH 1951, any MATH course numbered 2043 to 3080, or 'Y' in MATW)

Office Hours and Contact Information

Email address: dimitrios.diamantaras@temple.edu
Office telephone: 215-204-8169 (but you have a far better chance to reach me quickly by using email).
I will hold student office hours in my office, Ritter Annex 883, every Monday and Thursday 1:30-2:30 pm, and via Zoom every Wednesday 2:00-4:00 pm (the link will be available on Canvas) except for Martin Luther King Day and the days that fall in Spring Break. Office hours may be preempted by meetings; I will announce such events ahead of time on Canvas and offer alternative times. *Office hours are walk-in hours, but making appointments ahead of time is recommended. Students can also request to meet with me outside my office hours. Such requests should be submitted via email at least 24 hours in advance of the desired time.* My office phone number is (215) 204-8169, but see above about your chances of reaching me quickly, which are far better if you email me. I will endeavor to answer your emails within 24 hours, most of the time in much less time, except that emails received over the weekend may sometimes have to wait until Monday.

Requirements and Grading

There is one required text: *Games of Strategy,* by Avinash Dixit, Susan Skeath, and David McAdams, W. W. Norton, Fifth Edition, 2021. It has been ordered and should be available for purchase at the Main campus bookstore. The campus bookstore's website states the following information (as of November 3, 2021) about the cost of the textbook: Current Student Pricing; Pricing is subject to change

New:	$ 150.65
Used:	$ 113.00
Rent, new:	$ 119.00
Rent, used:	$ 96.40
eBook, buy: ***(180 days)***	$ 75.50
eBook, buy:	$ 95.00

On Amazon, I see (November 3, 2021) the following pricing information:

Kindle
$47.08 to rent
$95.00 to buy
Paperback
$88.95 to rent
$127.64 to buy
More Buying Choices
$89.76 (22 used & new offers)
Hardcover
$67.80 to rent
$128.00 to buy
More Buying Choices
$119.01(12 used & new offers)

You may be able to find better prices by searching other bookstores. The fifth edition, however, is required. Students should purchase or rent the textbook as soon as possible.

I will have lecture notes and other class materials for use by the students, and I will distribute such materials electronically via Canvas. Course materials, announcements, and homework assignments will be made available on Canvas. *You should check the class announcements page on Canvas regularly, in other words, at least once a day. I also strongly recommend setting your mobile devices to receive notifications from Canvas at least once daily.*

The grade for this course will be determined according to the following formula:

Homework   30%
Quizzes   5%
Midterm   30%
Final Exam   35%

For the dates of the midterm and the final exam, see the detailed course schedule at the end of this syllabus. The final exam will **not** be **cumulative, however, given the nature of mathematics, mastery of the earlier material will be necessary to do well on the final**.

Homework will be assigned every week and will be submitted on paper at the beginning of class, or alternatively electronically through Canvas, subject to **strict deadlines** that will be announced on Canvas. I will provide information on free, high-quality software that can be used for creating and processing mathematical-expression-heavy documents on the computer, which you can use for homework submissions. Alternatively, you may submit *readable* scans of your handwritten homework. There will be a quiz every week also, to be done on Canvas.

Note: all graded work (homework, quizzes, midterm, and final exam) has to be completed in order for the student to be eligible for a passing grade. The only exception is that students may miss submitting up to two homework assignments.

Letter Grades

Letter grades for the entire course will be assigned as follows:

90.0% and higher = A	70% – 74.99% = C
87.5% – 89.99% = A-	67.5% – 69.99% = C-
85.0% – 87.49% = B+	65.0% – 67.49% = D+
80% – 84.99% = B	60% – 64.99% - D
77.5% – 79.99% = B-	57.5% – 59.99% = D-
75.0% – 77.49% = C+	57.49% and lower = F.

Homework will be graded according to the following scale:

5 points	Submitted on time and completed with excellent quality
4 points	Submitted on time and completed with reasonable quality
3 points	Submitted on time, but completed with poor quality
2 points	Submitted late by 3 days or less, reasonable or excellent quality
0 points	Otherwise

Expectations for Class Conduct

The best way to maintain a safe and focused learning environment is for everyone to get vaccinated. Masks must be worn by vaccinated and unvaccinated people in all indoor or in enclosed spaces (including classrooms, the Library, the TECH Center, the Student Center, shuttles/buses, administrative spaces, common areas in residence halls, etc.). For your general health and well-being, hand washing and monitoring your health is still highly recommended. (The mask requirement may be amended once January arrives.) It is also important to foster a respectful and productive learning environment that includes all students in our diverse community of learners. Our differences, some of which are outlined in the University's nondiscrimination statement, will add richness to this learning experience. Therefore, all opinions and experiences, no matter how different or controversial they may be perceived, must be respected in the tolerant spirit of academic discourse.

Treat your classmates and instructor with respect in all communication, class activities, and meetings. You are encouraged to comment, question, or critique an idea but you are not to attack an individual. Please consider that sarcasm, humor and slang can be misconstrued in online interactions and generate unintended disruptions. Profanity should be avoided as should the use of all capital letters when composing responses in discussion threads, which can be construed as "shouting" online. Remember to be careful with your own and others' privacy. In general, have your behavior mirror how you would like to be treated by others.

Course Policies

Students can expect 6 to 8 hours of preparation (reading, reflecting, preparing assignments, reviewing notes, preparing for tests, etc.) per week, in addition to the time spent attending class.

Note carefully the dates for the midterm and the final examination, as listed on this syllabus. If you miss a exam without a valid excuse (illness, family emergency), you will receive a grade of **zero** for this exam. It is your responsibility to inform the instructor of your absence **BEFORE** the scheduled test. Any excuse must be documented in writing to the instructor's satisfaction.

Policy on Religious Holidays: If a student will be observing any religious holidays this semester which will prevent the student from attending a regularly scheduled class or interfere with fulfilling any course requirement, I will offer the student an opportunity to make up the class or course requirement if the student makes arrangements by informing me of the dates of the religious holidays in question within two weeks of the beginning of the semester (or three days before any holidays which fall within the first two weeks of class).

Academic dishonesty is reprehensible and I will punish it severely by referring the student for University disciplinary action **and** giving a zero grade for the exam or assignment involved. Please refer to the *Student Code of Conduct*, which can be found at http://studentconduct.temple.edu/, and to the Student Responsibilities document for details about academic dishonesty, which can be found at http://studentconduct.temple.edu/conduct-process. The following text in italics is quoted verbatim from the Temple University bulletin for 2006—2007 and it clarifies what the University's (and my) expectation is regarding academic integrity and honesty.

Temple University believes strongly in academic honesty and integrity. Plagiarism and academic cheating are, therefore, prohibited. Essential to intellectual growth is the development of independent thought and a respect for the thoughts of others. The prohibition against plagiarism and cheating is intended to foster this independence and respect.

Plagiarism is the unacknowledged use of another person's labor, another person's ideas, another person's words, another person's assistance. Normally, all work done for courses -- papers, examinations, homework exercises, laboratory reports, oral presentations -- is expected to be the individual effort of the student presenting the work. Any assistance must be reported to the instructor. If the work has entailed consulting other resources -- journals, books, or other media -- these resources must be cited in a manner appropriate to the course. It is the instructor's responsibility to indicate the appropriate manner of citation. Everything used from other sources -- suggestions for organization of ideas, ideas themselves, or actual language -- must be cited. Failure to cite borrowed material constitutes plagiarism. Undocumented use of materials from the World Wide Web is plagiarism.

Academic cheating is, generally, the thwarting or breaking of the general rules of academic work or the specific rules of the individual courses. It includes falsifying data; submitting, without the instructor's approval, work in one course which was done for another; helping others to plagiarize or cheat from one's own or another's work; or actually doing the work of another person.

Student Support Services

The following academic support services are available to support you:
Student Success Center
University Libraries
Undergraduate Research Support
Career Center
Tuttleman Counseling Services
Disability Resources and Services

If you are experiencing food insecurity or financial struggles, Temple provides resources and support. Notably, the Temple University Cherry Pantry and the Temple University Emergency Student Aid Program are in operation as well as a variety of resources from the Office of Student Affairs.

Disability Statement

Please bear in mind that COVID-19 may result in a need for new or additional accommodations. Students should seek out assistance from DRS.

Any student who has a need for accommodation based on the impact of a documented disability should contact Disability Resources and Services (DRS) located in the Howard Gittis Student Center South, 4th Floor at (215) 204-1280 or 215-204-1786 (TTY) or drs@temple.edu, to request accommodations and learn about the resources available to you. If you have a DRS accommodation letter to share with me, or you would like to discuss your accommodations, please contact me as soon as practical. I will work with you and with DRS to coordinate reasonable accommodations for all students with documented disabilities. All discussions related to your accommodations will be confidential. Accommodations are not retroactive.

Course schedule

January 10	Basics, How to Think about Strategic Games (Chapters 1, 2)
January 17	Martin Luther King DAY no class
January 24	Games with Sequential Moves (Chapter 3)
January 31	Simultaneous-Move Games: Discrete Strategies (Chapter 4)
February 7	Simultaneous-Move Games: Continuous Strategies (Chapter 5)
February 14	Combining Sequential and Simultaneous Moves (Chapter 6)
February 21	MIDTERM (Closed-Book; Covers Chapters 1 through 6)
February 28	SPRING BREAK no class
March 7	Simultaneous-Move Games: Mixed Strategies (Chapter 7)
March 14	Strategic Moves (Chapter 8)
March 21	Uncertainty and Information (Chapter 9)
March 28	The Prisoner's Dilemma and Repeated Games (Chapter 10)
April 4	Collective-Action Games (Chapter 11)
April 11	Evolutionary Games (Chapter 12)
April 18	Design of Incentives (Chapter 14)
April 25	Auctions (Chapter 15) Last day of classes
May 2	FINAL EXAM (Closed-Book Covers Chapters 7 through 15 except 13)

APPENDIX

Incompletes

Temple's policy on grades of "incomplete" (I) governs this course. A grade of I can only be given under the following conditions:
* The student is not able to finish some assignment(s) before the end of the semester for reasons outside his/her control.
* The student has completed a majority of the coursework at a passing level.
If under these circumstances the student wishes to receive an I grade, s/he must work out an arrangement with the instructor for completing the work. The specific requirements are given at the following university address:
http://policies.temple.edu/getdoc.asp?policy_no=02.10.13

Statement on Academic Freedom

Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) which can be accessed at
http://policies.temple.edu/getdoc.asp?policy_no=03.70.02.

Student Rights

Temple students have rights as well as responsibilities. These govern (among other things) course content, syllabi, course feedback forms, privacy, faculty office hours, grievances, and disability accommodations. For more information go to: http://bulletin.temple.edu/undergraduate/about-temple-university/student-rights/.