Instructor Information
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Office hours: Tu 12:30-2pm, 3:30-5pm, and by appointment

Course Description
Game theory teaches us how to think strategically. Information economics helps us analyze situations in which one agent has greater information than another agent with whom it interacts. This course surveys and develops concepts and techniques of game theory and information economics and their applications to issues of business strategy, including optimal compensation, advertising and pricing decisions, negotiation and bargaining situations, entry deterrence games, etc.

When you complete this course you should be able to:
- recognize and model strategic situations using game theory techniques
- predict when and how one's actions will influence others' decisions
- recognize and study typical strategic situations in a negotiating process
- apply such game theory techniques to make good business decisions

Prerequisites
B ECON 500 (Introduction to Business Economics).

Grading
I will follow the Foster School grading guidelines for elective classes, and assign grades with a median of 3.5. Your grade is made up of the following categories and weights:

Homework 30%
Term Project 40% (class presentation 20%, term paper 20%)
Midterm Exam 30%

Access and Accommodations
Your experience in this class is important to me. If you have already established accommodations with Disability Resources for Students (DRS), please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs in this course.

If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to: mental health, attention-related, learning, vision, hearing, physical or health impacts), you may contact DRS at 206-543-8924 or uwdrs@uw.edu. Reasonable accommodations are established through an interactive process between you, me and DRS. It is the policy and practice of the UW to create inclusive and accessible learning environments consistent with federal and state law.
Academic Integrity and Student Conduct
This program employs the principles and procedures espoused by the University of Washington Community Standards and Student Conduct guidelines to maintain academic integrity in the course. The Code establishes the expectation that students will practice high standards of professional honesty and integrity.

In particular, implementation of the Code at the Foster School of Business prohibits cheating, attempted cheating, and plagiarism—including improper citations of source material—as it pertains to academic work. Suspected violations will be handled in compliance with the University of Washington Student Conduct Code as outlined in Washington Administrative Code 478-121.

Other Expectations
Lectures will take place in Paccar Hall (PCAR) 295 on Mondays, 6-9:20pm. Attendance is critical to the learning experience.

In the classroom, active participation is expected. Please answer questions when asked, and ask questions when you need clarification.

Finally, I ask that you stay offline during class sessions and only use your laptop for note-taking or other class-related activities. Research shows that being online (surfing the web, checking email, texting, etc.) inhibits your ability to learn and distracts those around you (including me). Any disruptive behavior may negatively impact your grade. Thank you for supporting this policy.

Homework
Homework will consist of three problem sets, designed to test your understanding of key concepts and models and to give you an opportunity to employ those economic principles in a practical context. Problem sets must be turned in by the beginning of class on the day they are due. They will be posted on Canvas one week in advance. To receive full credit for a problem set, you must make a reasonable attempt to solve every problem assigned. The assignments will be graded with one of three grades: G, S, and U.

G, for "Great," will be given only for outstanding insight and explanation in a homework. U, for "Unsatisfactory," will be given when a student did not put forth enough effort to learn what the homework was designed to teach. Almost all homeworks will receive some form of an S, for "Satisfactory," as their grade. Within the S grade, an S+ will be given for an entirely correct solution to the homework problem; an S– will be given for a solution with severe errors; and an S will be given for everything between S+ and S–. Only a single problem on a particular homework will be graded. I will randomly select this problem after you submit your answers.

These are group work assignments: each team, made up of 3-4 students, should discuss approaches to solving the problems and turn in one paper for the whole group.

Problem sets may be written neatly by hand or typed, and may be submitted either in hard copy or electronically (in one file, preferably in pdf format) via a drop-box on the class Canvas site. Please do not send me your homework as an email attachment.
Exam
You will be tested on your knowledge of the material covered in class via one midterm exam. You will have a multi-day window to complete the exam, which should take you no more than 3-4 hours. The questions will be based on the types that you will have seen in the homework assignments or in class, but will not be pure regurgitation of mathematical steps: the test will be designed to stretch you a bit further, in order to better determine your true level of understanding of the key economic principles presented in the course.

You may use the lecture slides, your notes, and any other materials on the class Canvas site to assist you. You may not collaborate with your classmates or use any materials not provided by me (i.e. economics resources on the internet). Your completed exam should be submitted electronically via the appropriate Canvas dropbox by Monday, May 7th.

Any disputes of your grade must take place within one week of grades being posted, and must be submitted in writing.

Team Project
This may be done in groups of three to four students –the same groups used for the homework assignments. The goal is to research, write and present a short (no more than 10-12 pages) research paper that applies game theoretical tools we learn in class to a real-world issue. Look for situations or problems with strategic interactions between players, whether simultaneous or sequential. You may draw from your own experience and knowledge of a particular industry, and/or rely on news reports. You have the first four weeks of the course to start thinking about a project. Please do not hesitate to come talk to me about possible topics of application.

This assignment will have three components:

1) a one-page proposal outlining the issue, the players, how you intend to analyze it, and any sources you may plan on using, due by the end of Week 5 (i.e.: by Saturday, 04/28, 11:59pm), to be submitted electronically via a drop-box on the class Canvas site.

2) the research paper itself, due on Thursday, 05/31, 11:59pm (Week 10). This must be typed in 12-point font, double-spaced, and submitted electronically via a drop-box on the class Canvas site. The 12-page limit does not include any graphs or tables (such as decision trees or payoff matrices). The paper should include: an introduction, where the research question is clearly stated and motivation for it is provided; a section with the relevant background, the framework or model underlying your analysis, as well as a description of any sources used in your research; a section describing your analysis and findings; and a final section where you state your conclusions and their implications (for business decisions, policy, or further research).

3) a class presentation of the project, which will be scheduled for Week 8 (Monday, 05/14) or Week 9 (Monday, 05/21). You should prepare to speak for 10-15 minutes and be ready to answer questions from me and from your classmates for another 10-15 minutes.

The project counts for 40% of your total grade (20% for the write-up and 20% for the presentation). The outline will not be graded.
The University has a license agreement with VeriCite, an educational tool I plan to use in this class that helps prevent and identify plagiarism from Internet resources. It is for this reason that I ask that the essays also be submitted electronically – to be checked by VeriCite. The VeriCite Report will indicate the amount of original text in your work and whether all material that you quoted, paraphrased, summarized, or used from another source is appropriately referenced.

**Course Schedule** (tentative; confirmed details and assignments to be posted on Canvas)

**03/26: Session 1**: Presentation and Introduction to Game theory; Simultaneous Games (1): Prisoner’s Dilemma

**04/02: Session 2**: Simultaneous Games (2): Repeated Games, Cooperation and Sustainability

**04/09: Session 3**: Simultaneous Games (3): Mixed Strategies and Unpredictability (tentative) **Homework #1 due, 6pm**

**04/16: Session 4**: Sequential Games (1): First-Mover and Second-Mover Advantage

**04/23: Session 5**: Sequential Games (2): Strategic Moves, Commitment and Credibility (tentative) **Homework #2 due, 6pm**

**04/28 at 11:59pm – Term Project Proposal (Outline) due**

**04/30: Session 6**: Sequential Games (3): Bargaining, Principal-Agent (tentative) **Homework #3 due, 6pm**

**05/03 at 6pm until 05/07 at 6pm – Midterm Exam Exam Window**

**05/07: Session 7**: Review and Conclusion: Choosing the Right Game

Midterm Exam due, 6pm

**05/14: Session 8**: Presentations (1)

**05/21: Session 9**: Presentations (2)

**05/31 at 11:59pm – Term Project Paper due**

**Class Materials**

Lecture slides, homework assignments, and other resources will be made available on Canvas. Please note that there is no required textbook in this course. You may find some of the following references useful to supplement the material from class:

*Microeconomics, 2nd Edition*, by Austan Goolsbee, Steven Levitt, and Chad Syverson. New York: Worth, 2016 [your textbook for B ECON 500; especially chapters 11, 12 and 16]
