Instructor Information
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Office hours: We 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
- devise strategic moves that allow you to exploit a situation (change a game) to your benefit
- apply such game theory techniques to make, defend, or critique a business decision

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:

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<thead>
<tr>
<th>Category</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Homework</td>
<td>25%</td>
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<tr>
<td>Term Project</td>
<td>45%</td>
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<tr>
<td>Midterm Exam</td>
<td>30%</td>
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<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>(class presentation 20%, term paper 20%, peer review 5%)</td>
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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) 391 on Thursdays, 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 five 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. 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.

To receive full credit for a problem set, you must make a reasonable attempt to solve every problem assigned. Only a single problem on a particular homework will be graded. I will randomly select this problem after you submit your answers.

Problem sets may be written neatly by hand and scanned or typed, and must be submitted electronically (in one file, preferably in pdf format) via a drop-box on the class Canvas site by the due date. They will be posted on Canvas one week in advance. 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 Sunday, May 19th.

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 Sunday, 05/05, 11:59pm), to be submitted electronically via a drop-box on the class Canvas site.

2) the **research paper** itself, due on Thursday, 06/06, 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 (Thursday, 05/23) or Week 9 (Thursday, 05/30). 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.

4) a **peer review** of another team’s project, due by Thursday, 06/13 (Final Exams week). This will consist in a post no longer than 400 words (in a discussion board created for this purpose), offering additional arguments that support their thinking and conclusions, or a critique that points out a possible weakness in their analysis, or (if you think they may help clarify and strengthen their work) questions about their descriptions, choice of framework, and/or findings. The team pairings for this peer review will be announced on Week 10.

The project counts for 45% of your total grade (20% for the write-up, 20% for the presentation, and 5% for the peer review). 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** (more details and assignments to be posted on Canvas)

**04/04: Session 1:** Presentation and Introduction to Game theory; Simultaneous Games (1): Prisoner’s Dilemma

**04/11: Session 2:** Simultaneous Games (2): Repeated Games, Cooperation and Sustainability

**04/18: Session 3:** Simultaneous Games (3): Mixed Strategies and Unpredictability

**Homework #1 due, 6pm**

**04/25: Session 4:** Simultaneous Games (4) and Sequential Games (1): First-Mover and Second-Mover Advantage

**Homework #2 due, 6pm**

**05/02: Session 5:** Sequential Games (2): Strategic Moves, Commitment and Credibility

**Homework #3 due, 6pm**

**05/05 at 11:59pm – Term Project Proposal (Outline) due**

**05/09: Session 6:** Sequential Games (3): Bargaining, Principal-Agent

**Homework #4 due, 6pm**

**05/16: Session 7:** Sequential Games (4): Games of Uncertainty

**Homework #5 due, 6pm**

**05/16 at 9:30pm until 05/19 at 11:59pm – Exam Window**

**05/23: Session 8:** Presentations (1)

**05/30: Session 9:** Presentations (2)

**06/06: Session 10:** Review and Conclusion: Choosing the Right Game

**Term Project Paper due, 11:59pm**

**06/13 at 11:59pm – Peer Review of 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:


