

ECON 420: Game Theory

Oregon State University

Spring 2020

Instructor

Michael Jerman

- Remote office hours: MW 12:00pm-1:00pm, or by appointment
- Email: michael.jerman@oregonstate.edu
- Zoom Personal Meeting ID: 297-626-2177

Course Structure

Due to current quarantine restrictions, this course will be 100% online. The scheduled meeting time (MW 8:00am–9:50am) will be used for live-streamed lectures and online group activities.

Live-streamed lectures will utilize YouTube (or similar streaming platform). Links to each class's lecture will be provided on Canvas before the start of class.

Course discussion will occur on Slack. Questions during the lecture can be posted to the relevant Slack channel and will be visible to the instructor during the live stream.

Course Description

Throughout much of the history of economics the discipline focused on matters of decision theory. What goods and services should consumers buy to maximize their utility subject to their budget constraints? What products should firms make, how should they make them, and how many should they make?

In the mid-twentieth century it became clear that many economic decisions had strategic dimensions: That is, outcomes depended not only on the choices of agents, but on the choices of other agents as well. This requires all of the involved agents (or players) to think about what their counterparts care about, predict what they are going to do, and respond accordingly. Game theory is the study of these interactions

Learning Outcomes

Upon completion of the course, students will:

- Gain knowledge of the fundamental principles of game theory
- Become familiar with basic classes of games
- Apply mathematical skills to solve for equilibrium
- Recognize real-world applications and limitations of game theory

Prerequisites

The prerequisite for this course is ECON 311 or ECON 411 (intermediate micro).

Textbook

The required textbook for this course is *Game Theory* by Giacomo Bonanno. The digital version of the textbook is provided by the author free of charge. A pdf copy of the textbook will be posted on Canvas.

Canvas

All assignments and grades will be will be posted on Canvas (canvas.oregonstate.edu). This is the official website for the course, and you will be responsible for any and all information that is posted there. Therefore if you have any difficulties accessing Canvas it is imperative that you resolve them as quickly as possible by contacting the Canvas support at canvas@oregonstate.edu.

Slack

Questions regarding the course material or general questions about the course should be posted on the Slack workspace for this course ([osu-econ420](#)). Slack allows for messages on public channels and direct messages to other users. I encourage most questions to be posted publicly so everyone in the course can benefit from the answers.

Instructions for installing and signing up for Slack are provided on the Canvas homepage.

Attendance

Participation in periodic in-class exercises will be recorded and may account for up to 10% extra credit.

Homework

There will be weekly homework assignments throughout the term, assigned and submitted on Canvas. No late assignments will be accepted. You are encouraged to work together in groups, but each person must submit their own assignment.

Exams

There will be one midterm examination and one comprehensive final examination, both assigned and submitted on Canvas. There will be no time limit on the exams, but they will need to be submitted before the due date and time. No makeup exams will be given. If the midterm is not submitted due to a *documented* emergency, the weight of the exam will be placed on final. A documented emergency that causes the final to not be submitted will result in an incomplete for the course. Failure to submit any exam for a reason other than a documented emergency will result in a score of zero.

Grades

Your grade will be calculated based on the following weights:

- Homework: 50%
- Midterm: 20%
- Final: 30%

The *minimum* letter grade that you will receive based on your weighted total of points earned is given below:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-
93	90	87	83	80	77	73	70	67	63	60

Statement Regarding Students with Disabilities

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Student Conduct

You are expected to adhere to the university's Code of Student Conduct

At a minimum, any incidence of academic misconduct (as defined by the above code) will result in a grade of "F" for the course.