

# **ECON 4080: Game Theory**

**Spring 2026**

Instructor: Professor Yongmin Chen

<https://www.colorado.edu/faculty/chen-yongmin/>

Office: Econ 108

Class Time and Location: TTH 5:00-6:15pm; ECON 119

Office Hours: Tuesday 2:50-4:50pm; Thursday 2:50-4:50pm

**Course Description:** Game theory studies how individuals make decisions in situations where there are strategic interactions between decision makers. It plays an important role in modern economic analysis. Designed for advanced undergraduates, this course explores game theory and its applications in economics. It will introduce and develop methods of game theoretical analysis. Students will learn how to model and analyze economic problems in various strategic settings to gain fundamental economic insights.

**Prerequisites:** Students are expected to be familiar with (1) basic calculus, including the differentiation and integration of simple functions, (2) basic probability theory, and (3) intermediate microeconomic theory.

**Textbook:** *Game Theory*, by Steven Tadelis, Princeton University Press.

**Homework assignments** are very important for you to review concepts and solve problems. Each homework is due at the beginning of the class at the indicated date on Canvas. You will receive full credit if the completed homework is submitted on time. No credit will be given to incomplete or late homework. One lowest homework score will be dropped in computing grades. Solutions to homework problems will be discussed in class.

**How to Study effectively:** **Read the assigned material before each class** to be prepared.

**Attend all classes** and take detailed class notes. After each class, **have a quick review within the same or next day**. Complete each homework on time. Get your questions for each class answered without delay.

**Grading:** Grades are based on homework (20%), in-class quizzes (15%), a midterm exam (25%), and the final exam (40%). No makeup quizzes or exams will be given. The in-class quizzes will be based mainly on examples discussed in class and problems from the homework assignments. One lowest score for in-class quizzes will be dropped in computing grades.

Below is a tentative schedule. Changes to the schedule will be announced in class during the semester, and you are responsible for updating the information accordingly. Chapters and page numbers indicated below correspond to those in the textbook.

Lectures 1-3	The Single-Person Decision Problem Readings: Ch. 1-2. HW 1. Pages 34-35: 2.4, 2.6, and questions assigned during class.
Lectures 4-6	Basic Concepts of Games Readings: Ch.3; Ch. 7.1 HW 2. Page 58: 3.2, 3.4, 3.7; pp. 147, 7.1 Quiz 1
Lectures 7-11	Static Games of Complete Information Readings: Ch. 4, 5, 6.1-6.2. HW 3. Pages 76-77: 4.3, 4.5. HW 4. Pages 95-99: 5.4, 5.5, 5.6, 5.8, 5.10, 5.14. Quiz 2 HW 5. Pages 123-124: 6.4, 6.7.
Lectures 12-14	Dynamic Games of Complete Information Readings: Ch. 7, 8 HW 6. Pages 148: 7.5, 7.6
Midterm Exam	Tuesday, March 3, during class time.  HW 7. Pages 170-172: 8.4, 8.8
Spring Break: Week 11 (3/16-20)	
Lectures 15-19	Dynamic Games of Complete Information (Continue) Readings: Ch. 9, 10, 11 HW 8. Pages 186-187: 9.1, 9.3; page 215: 10.2 Quiz 3 HW 9. Page 236: 11.2, 11.5

Lectures 20-22	Static Games of Incomplete Information Readings: Ch. 12. HW 10. Page 266: 12.2 Quiz 4
Lectures 23-26	Dynamic Games of Incomplete Information Readings: Ch. 15, 16. HW 11:
Final Exam:	Time indicated on Canvas

# **University Policies**

## **Honor Code**

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the [Honor Code](#). Violations of the Honor Code may include but are not limited to: plagiarism (including use of paper writing services or technology [such as essay bots]), cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. Understanding the course's syllabus is a vital part of adhering to the Honor Code.

All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution: [StudentConduct@colorado.edu](mailto:StudentConduct@colorado.edu). Students found responsible for violating the Honor Code will be assigned resolution outcomes from Student Conduct & Conflict Resolution and will be subject to academic sanctions from the faculty member. Visit [Honor Code](#) for more information on the academic integrity policy.

## **Accommodation for Disabilities, Temporary Medical Conditions, and Medical Isolation**

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or [DSinfo@colorado.edu](mailto:DSinfo@colorado.edu) for further assistance. If you have a temporary medical condition, see [Temporary Medical Conditions](#) on the Disability Services website.

## **Accommodation for Religious Obligations**

Campus policy requires faculty to provide reasonable accommodations for students who, because of religious obligations, have conflicts with scheduled exams, assignments, or required attendance. Please communicate the need for a religious accommodation in a timely manner. In this class, please communicate the need for a religious accommodation in the first two weeks of the semester. See the [campus policy regarding religious observances](#) for full details.

## **Preferred Student Names and Pronouns**

CU Boulder recognizes that students' legal information does not always align with how they identify. If you wish to have your preferred name (rather than your legal name) and/or your preferred pronouns appear on your instructors' class rosters and in Canvas, visit the [Registrar's website](#) for instructions on how to change your personal information in university systems.

## **Classroom Behavior**

Students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote, or online. Failure to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, marital status, political affiliation, or political philosophy.

### **Additional classroom behavior information**

- [Student Classroom and Course-Related Behavior Policy.](#)
- [Student Code of Conduct.](#)
- [Office of Institutional Equity and Compliance.](#)
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## **Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation**

CU Boulder is committed to fostering an inclusive and welcoming learning, working, and living environment. University policy prohibits [protected-class](#) discrimination and harassment, sexual misconduct (harassment, exploitation, and assault), intimate partner abuse (dating or domestic violence), stalking, and related retaliation by or against members of our community on- and off-campus. The Office of Institutional Equity and Compliance (OIEC) addresses these concerns, and individuals who have been subjected to misconduct can contact OIEC at 303-492-2127 or email [OIEC@colorado.edu](mailto:OIEC@colorado.edu). Information about university policies, [reporting options](#), and [OIEC support resources](#) including confidential services can be found on the [OIEC website](#).

Please know that faculty and graduate instructors are required to inform OIEC when they are made aware of incidents related to these concerns regardless of when or where something occurred. This is to ensure the person impacted receives outreach from OIEC about resolution

options and support resources. To learn more about reporting and support a variety of concerns, visit the [Don't Ignore It page](#).

## **Mental Health and Wellness**

The University of Colorado Boulder is committed to the well-being of all students. If you are struggling with personal stressors, mental health or substance use concerns that are impacting academic or daily life, please contact [Counseling and Psychiatric Services \(CAPS\)](#), located in C4C, or call (303) 492-2277, 24/7.