

Fahad Khalil (*khalil@uw.edu*)  
Winter 2022  
OH: 2:20-2:50 MW; 11:00-12:00 TH

ECON 485  
Game Theory

Lectures will be offered hybrid. For lectures offered over Zoom, lecture slides will be posted on Canvas. Lectures will not be recorded. Office hours will be held remotely through Zoom. Exams will be given in-person.

## Texts:

- Required: *Game Theory for Applied Economists*, by Robert Gibbons, Princeton University Press.
- Recommended: *The Art of Strategy: A Game Theorist's Guide to Success in Business and Life*, by Avinash Dixit and Barry Nalebuff, Norton. (see also *Thinking Strategically*, by Avinash Dixit and Barry Nalebuff, Norton).
- Other textbooks:
  - *Game theory: An Introduction*, by Steve Tadelis, Princeton University Press. This book is a good alternative to Gibbons.
  - *Games, Strategies, and Decision Making*, Joseph E. Harrington, Jr., Worth Publishing. This book has good examples from industrial organization.

## Topics and Goals:

We will follow the book by Gibbons very closely. Parts 1 and 2 on Static and Dynamic Games of Complete Information will be done quite thoroughly. We will provide an introduction to Games of Incomplete Information by picking topics from Parts 3 and 4.

I strongly urge everyone to read the books by Dixit and Nalebuff, and they can be read without preparation in game theory. They are very well written and *Thinking Strategically* is also a bestseller. They complement the book by Gibbons very well and provide many wonderful examples.

Students are expected to be comfortable with elementary partial derivatives and solving systems of equations.

As learning goals, by the end of the course, students should be able to build games to think about common economic situations, to understand standard economic models based on simple game theory, and be able to apply standard solution concepts to static games, dynamic games, repeated games and games of incomplete information.

## Problem sets and Tests:

- Problem sets will be handed out periodically and answer keys will follow soon after. They will not be graded, but you are strongly encouraged to do them regularly to check if you are making adequate progress.
- There will be **four** tests in total, and each test will be *cumulative*.

Test 1	15% of the grade	(Wed, January 19)
Test 2	25% of the grade	(Mon, February 7)
Test 3	25% of the grade	(Mon, February 28)
Test 4	35% of the grade	<b>(UW Sch: Thurs, Mar 17, 8:30-10:20)</b>

- *The Economics department has a policy on academic conduct and academic honesty. Please be familiar with it : <https://econ.washington.edu/policy-academic-conduct>*
- *“Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW’s policy, including more information about how to request an accommodation, is available at Religious Accommodations Policy (<https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/>). Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form (<https://registrar.washington.edu/students/religious-accommodations-request/>).”*