Game Theory	University of Houston
POLS 6389	Spring 2019
Monday	Francisco Cantú
5:30-8:20 p.m.	fcantu10@uh.edu
McElhinney Hall 101	Office Hours: Fri 3-5 p.m.

This is a graduate-level introduction to game theory. This course will provide a basic overview on the techniques to study the strategic interaction of rational agents as well as to discuss their application to different political settings. Covered topics will include (but not limited to) games of complete information, games of incomplete information, and repeated games. While there is no formal mathematical prerequisite, some basic knowledge on basic calculus and probability theory will come handy.

Requirements

Problem sets (45%): There will be several problem sets that will complement the lectures. Solutions to the problem sets will be provided after each assignment is due. You are required to type your individual solutions to the problem sets and show all your work to reach every answer. Assignments submitted after the deadline will get a 10% penalty and another 10% for every additional 24-hour delay.

Exams (2×22.5%): There will be two in-class exams based on the reading material and the problem sets. You will be allowed to consult your notes.

Presentation (10%): Teams of two (or at most three) students will present one of articles in this syllabus that apply game theory to politics. Students not presenting on a given session should submit a short memo with their most important questions or issues about the article. The deadline for the memos is Sunday at midnight.

Course Policies

Disabilities: The University of Houston System complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, pertaining to the provision of reasonable academic adjustments/auxiliary aids for students with a disability. In accordance with Section 504 and ADA guidelines, the University of Houston strives to provide reasonable academic adjustments/auxiliary aids to students who request and require them.

If you have a disability that requires special testing accommodations or other classroom modifications, you need to notify both me after you contacted the Center for Students with DisAbilities (CSD).[1]

Counseling and Psychological Services: Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (`www.uh.edu/caps`) by calling 713-743-5454 during and after business hours for routine appointments or if you or someone you know is in crisis. No appointment is necessary for the "Let's Talk" program, a drop-in consultation service at convenient locations and hours around campus.[2]

Academic Integrity: There is a zero tolerance policy for plagiarism in any of the required activities for this course, and any violation will be penalized in the terms cited by the UH's Academic Dishonesty Policy.[3]

Course Materials

Lectures will be organized around the following textbooks (available in the bookstore):

Tadelis, S. (2013). *Game Theory: An Introduction*. Princeton University Press

Additionally, we will review articles and selected parts of the following textbooks:

Osborne, M. J. (2004). *An Introduction to Game Theory*. Oxford University Press

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[1] `http://www.uh.edu/csd/`

[2] `http://www.uh.edu/caps/outreach/lets_talk.html`

[3] `http://www.uh.edu/academics/catalog/policies/academ-reg/academic-honesty/`

McCarty, N. and Meirowitz, A. (2007). *Political Game Theory: An Introduction*. Cambridge University Press

Gehlbach, S. (2013). *Formal Models of Domestic Politics*. Cambridge University Press

Tentative Course Outline

- Decision Theory (January 14)

    Readings:

    Tadelis, chapters 1 and 2

- Pure-Strategy Nash Equilibrium (January 28, February 4)

    Readings:

    Tadelis, chapters 3-5

    Gans-Morse, J., Mazzuca, S., and Nichter, S. (2014). Varieties of clientelism: Machine politics during elections. *American Journal of Political Science*, 58(2):415–432

    Tsebelis, G. (1988). Nested games: The cohesion of french electoral coalitions. *British Journal of Political Science*, 18(2):145–170

- Mixed Strategies (February 11, February 18)

    Readings:

    Tadelis, chapter 6

    Palacios-Huerta, I. (2014). *Beautiful Game Theory: How Soccer Can Help Economics*. Princeton University Press, chapters 1 and 2

- Extensive Form Games (February 25, March 4)

    Readings:

    Tadelis, chapters 7-9

    Cameron, C. M. (2000). *Veto Bargaining*. Cambridge University Press, chapter 4

- First exam (March 18)

- Incomplete Information (March 25, April 1)

    Readings:

    Tadelis, chapters 12 and 15

    Svolik, M. W. (2012). *The Politics of Authoritarian Rule*. Cambridge University Press, chapter 3

- Applications of Dynamic Games of Incomplete Information (April 8, April 15)

    Readings:

    Tadelis, chapters 16-18

    Gehlbach, S. (2013). *Formal Models of Domestic Politics*. Cambridge University Press, chapter 3

- Repeated Games (April 22)

    Readings:

    Tadelis, chapters 10 and 11

    Milgrom, P., North, D., and Weingast, B. W. (1990). The role of institutions in the revival of trade: The medieval law merchant, private judges, and the champagne fairs. *Economics and Politics*, 2(1):1–23

- Second exam (April 30)