

PS 204B: Intermediate Game Theory
Course Syllabus
Spring 2016

Professor Leslie Johns
ljohns@polisci.ucla.edu
Bunche Hall, office #3381

Math mavens:

- Bronwyn Lewis Friscia bronwyn.lewis.friscia@ucla.edu
- Ayo Laniyonu alaniyonu@gmail.com.

LOCATION and TIME:

BUNCHE 4276
MW 8:00—9:15 am

Office hours: Wednesdays 10:00 am—11:00 am and by appointment

COURSE DESCRIPTION:

This is an intermediate-level game theory course. Students are assumed to have already completed PS 204A (introductory game theory). Students who have not completed this training should consult with the professor before enrolling.

ASSIGNMENTS and GRADING

Your grade in this course is based on the following components.

Weekly problem sets: 50%

Problem sets will be distributed each week and due the following Tuesday at the beginning of class. Late assignments will not be accepted. There will be no make-up assignments.

Final project: 25%

Students will write a 5-10 proposal for an applied game theory paper on a research topic of their choice. Details for this assignment will be distributed in class.

Final exam: 25%

TEXTS

Required text:

Gibbons, Robert. (1992) *Game Theory for Applied Economists*. Princeton, NJ: Princeton University Press.

Many copies of this book are floating around Bunche Hall. If you don't want to buy a copy of your own, you can surely borrow a copy from someone else.

Supplemental texts:

Readings from various texts will be assigned and available on the course website. However, you might wish to purchase the following books if you are particularly interested in the relevant topics or want supplemental readings. These vary greatly in their level of technicality. So talk to me first if you have any questions about which (if any) you should buy.

Fudenberg, Drew and Jean Tirole. (2000) *Game Theory*. Cambridge, MA: MIT Press.

Mas-Colell, Andreu, Michael D. Whinston, and Jerry R. Green. (1995) *Microeconomic Theory*. New York: Oxford University Press.

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

Muthoo, Abhinay. (2002) *Bargaining Theory with Applications*. Cambridge: Cambridge University Press.

Myerson, Roger B. (2004) *Game Theory: Analysis of Conflict*. Cambridge, MA: Harvard University Press.

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

Osborne, Martin J. and Ariel Rubinstein. (1994) *A Course in Game Theory*. Cambridge, MA: MIT Press.

Simon, Carl P. and Lawrence Blume. (1994) *Mathematics for Economists*. New York: W.W. Norton & Company

Articles:

These will be made available on the course website at:
<https://moodle2.sscnet.ucla.edu/course/view/16S-POLSCI204B-1>

TOPICS, READINGS, and SCHEDULE

The class will be altered to suit the needs of enrolled students. However, the following is a preliminary plan.

Theoretical Tools

Static games of incomplete information (weeks 1—2)

- Gibbons, Chapter 3

Dynamic games of incomplete information (weeks 3—4)

- Gibbons, chapter 4.0—4.1, pages 173—183

Common Political Science Applications

Costly signaling games (weeks 5—6)

- Gibbons, chapter 4.2, pages 183—210
- Gilligan, Johns, and Rosendorff (2010)
- Hollyer and Rosendorff (2011)
- Gordon and Hafer (2005)

Cheap talk games (week 7)

- Gibbons, chapter 4.3.A, pages 210—218
- Gilligan and Krehbiel (1987)

Bargaining games (week 8)

- Muthoo, chapters 2 and 3

Stochastic (Markov) games (weeks 8—9)

- Acemoglu and Robinson (2001)

Global games (week 10)

- Morris and Shin (1998)

Other Possible Topics (time-permitting)

Repeated game

Timing games

Mechanism design