

PSCI 3225: Strategy & Politics

Tuesday & Thursday 3:30-4:45 PM

Instructor: Dalton Dorr

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Office Hours: Ketchum 251: Tuesdays 9:00-11:00am; or by appointment.

Course Description

People make only a few decisions on a whim. The majority of the important decisions we make are based upon some measure of structure and calculation. Political actors consider the potential choices and preferences of other actors before strategically making their own decisions. To make sense of these deliberations this course introduces students to the tools and concepts of game theory, a powerful and highly general approach to understanding how people make decisions in strategic settings. Game theory has applications to many fields of inquiry including economics, sociology, biology, and, of course, political science. In this course, students will be introduced to the fundamentals of game-theoretic reasoning. We will focus particularly on those aspects of game theory that are most useful for understanding politics, and consider how rational choice decision-making can guide and inform our understanding of real-world political phenomena.

Recommended Texts

Game Theory for Political Scientists, James Morrow (1994)

Prisoner's Dilemma, William Poundstone (1993)

There are no required texts for this course, the only readings I require are from journal articles. These articles are dense and difficult, the texts I suggest are much easier to read and may help you to comprehend concepts and features covered in class and in the required readings. With that, you are not required to purchase these books and they are on reserve at Norlin Library.

Grading

Your final grade will be based on the following four criteria:

Participation: 10%

Problem Sets: 30%

Midterm Exam 1: 20%

Midterm Exam 2: 20%

Final Exam: 20%

Participation - 10%

The participation grade is based upon a student's preparation, effort, and involvement in class discussion and activities. Students are expected to complete all assignments and readings prior to class and come ready to engage in the scheduled activities for the class period.

Problem Sets - 30%

There will be a total of eight (8) problem sets that are to be completed outside of class. You may work on the problems sets together in small groups (2-4 people), and compare your work, but only after attempting them alone. Please note that the material in this class is a little technical and you will benefit enormously from repetition and practice. This is a class where you will learn by doing. As such, I strongly recommend that you take this requirement very seriously and attempt the problem sets on your own before seeking help from others. If you simply copy someone's answers, you will not learn anything from puzzling over the problems and will likely do poorly on exams. You are required to turn in every problem set on the date they are due. I will deduct a flat 20 points from the assignment grade for each day that the assignment is late. Students who turn in all problem sets on time will earn the right to drop their lowest scoring problem set from their final grade.

Midterm Exams - 40%

Midterm 1 will be held on Thursday, February 7th. Midterm 2 will be held on Thursday, March 21. The exams are in-class and closed book, and you will not be permitted to work together or use outside help.

Final Exam - 20%

The final exam will be held on Sunday, May 5th at 4:30 pm. The final exam is comprehensive, which means it will cover material from the entire semester.

Letter Grade Scale

$A : > 93$; $A- : 92 - 90$

$B+ : 89 - 87$; $B : 86 - 83$; $B- : 82 - 80$

$C+ : 79 - 77$; $C : 76 - 73$; $C- : 72 - 70$

$D+ : 69 - 67$; $D : 66 - 63$; $D- : 62 - 60$

$F : < 60$

A Note on Math: Though the advanced study of game theory does require some knowledge of higher math, this introductory course does not involve any math more complicated than algebra and arithmetic. I will review most of the mathematics as we move through the semester, but recognize that the purpose of this course is to teach you to apply this math to decision-making scenarios. That said, if you are uncomfortable with algebra (solving for unknown parameters given a simple equation) you may struggle in this class. If you have concerns, please meet with me.

Assignments

Problem sets should be turned in as a hard copy at the start of class. Problem sets submitted after the start of class will have 20 points deducted from the grade. Each 24 hour period after 3:30 pm of their assigned due date will result in an additional 20 point grade deduction. In the event of an emergency that prevents you from completing a problem set, come see me and we will discuss a resolution.

Syllabus

This syllabus represents a general plan for the course; I reserve the right to deviate from it as necessary. Students will be given advance notification of any changes to the course plan. Students are responsible for the contents outlined within this syllabus and any changes made thereafter.

Course Outline

Date	Content	Notes
Unit 1	Purpose & Structure	
Week 1	Game Theory in Political Science	<i>Opt. (Morrow Ch.1; Poundstone Ch.1)</i>
Week 2	Utility and Decision Theory	<i>Opt. (Morrow Ch.2)</i> Problem Set 1 due 1-28-20
Week 3	Collective Choice & Preference Aggregation	Read: Iversen & Soskice 2006 (canvas) Problem Set 2 due 2-4-20
Week 4	Review & Midterm 1	
Unit 2	Applications and Equilibrium	
Week 5	Normal Form Games	<i>Opt. (Morrow pg.73-104)</i> Problem Set 3 due 2-18-20
Week 6	Nash Equilibrium	Read: Weingsat 1997 (canvas) Problem Set 4 due 2-25-20
Week 7	Introduction to Mixed Strategies	<i>Opt. (Poundstone Ch.3)</i>
Week 8	More Mixed Strategy	<i>Opt. (Poundstone Ch.6-8 & Ch.10-12)</i> Problem Set 5 due 3-10-20
Week 9	Extensive Form Games	<i>Opt. (Morrow Ch.5)</i>
Week 10	Review & Midterm 2	
Unit 3	Information	
Week 11	Uncertainty	Problem Set 6 due 4-7-20
Week 12	Incomplete Information	
Week 13	Signaling	<i>Opt. (Morrow Ch.6)</i> Problem Set 7 due 4-21-20
Week 14	Repeated Games	Read: Milgrom et al. 1990 (canvas) <i>Opt. (Morrow pg.260-291)</i> Problem Set 8 due 4-28-20
Week 15	Applications & Review	
Final	Final Exam: Monday, May 4 at 1:30-4:00 pm	

University Policies

Honor Code

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council and those students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member involved and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Please refer to <http://honorcode.colorado.edu> to view the specific guidelines. If you have any questions related to this policy, please contact the Honor Code Council at honor@colorado.edu.

Classroom Behavior

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail 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 differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See policies at: <http://www.colorado.edu/policies/classbehavior.html> and at: <http://www.colorado.edu/studentaairs/judicialaairs/code.html>

Disability

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact: (303) 492-8671, Center for Community, N200, and <http://www.colorado.edu/disabilityservices>.

Religious Observances

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Full details at: <http://www.colorado.edu/policies/facrelig.html>.

Discrimination and Harassment

The University of Colorado at Boulder Discrimination and Harassment Policy and Procedures, the University of Colorado Sexual Harassment Policy and Procedures, and the University of Colorado Conflict of Interest in Cases of Amorous Relationships Policy apply to all students, staff, and faculty. Any student, staff, or faculty member who believes s/he has been the subject of sexual harassment or discrimination or harassment based upon race, color, national origin, sex, age, disability, creed, religion, sexual orientation, or veteran status should contact the Office of Discrimination and Harassment (ODH) at (303) 492-2127, or the Office of Student Conduct (OSC) at (303) 492-5550. Information about the ODH, the above reference policies, and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <http://www.colorado.edu/odh>.