Overview

This course is an introduction to a particular approach to studying politics: the rational-choice approach, also called formal political theory. This approach simply assumes that people are rational. This just means that they have preferences over outcomes and take purposeful actions to achieve outcomes they prefer more to ones they prefer less. This course begins with a dissection of rational individual decision making as well as some of the limitations of the rationality assumption. Then we discuss how multiple people can make a social choice. Social choices are determined not just by individual preferences, but by the agenda, who controls that agenda, and the rules by which votes are conducted and translated into outcomes. We will explore how various voting rules and types of preferences can lead to different outcomes under certain circumstances, and the implications of that for democracy.

Next, we consider more explicitly strategic models of choice. Strategy simply refers to the fact that, in politics, an individual’s choice is not usually directly translated into an outcome or policy. Individuals must account for the choices of others when trying to achieve desired outcomes. For example, the leader of a country considering whether to invade another country must take into account what they expect the targeted country and its allies will do in response. We will use the tools of game theory and the concept of equilibrium to understand how people behave in those situations. Next, we’ll apply these models to the particular situation of delegation in various institutions.

Then, we’ll explore collective action, or if and how people can cooperate to achieve common goals. We’ll apply these theories to problems of the environment to show what factors makes them solvable, or seemingly intractable. Finally, we’ll cover a type of model which accounts for uncertainty. How politicians make decisions when fundamental characteristics of a situation are unclear is one of the key questions of politics. These models will allow us to understand how leaders process information and make decisions in those circumstances.

Most of the material involves simple models and several cases from actual politics. Some of the material, mostly in the game theory section of the course, will involve some algebra and probability theory. No knowledge beyond high-school algebra is required, but familiarity and comfort with mathematical logic will serve you well in this course.

Assignments and Grading

- Midterm Exam 30%
- Final Exam 40%
- Three Problem Sets 20% (PS1 = 5%, PS2 = 5%, PS3 = 10%)
Section Participation 10%

There will be two exams, which will make up the majority of the total grade for this course. The midterm exam will take place on October 30 and is worth 30% of the overall grade. The final will be on December 19 and is worth 40% of the overall grade. The final will be cumulative and cover all of the material in the course, although it will focus more on content which will be presented after the midterm. All exams will be closed book. Students may not use materials other than a non-scientific calculator or pencil/pen unless they have a special need due to a disability or language skills.

In order to perform well on the exam, you must both attend section and complete the assigned problem sets. Section participation is worth 10% of the grade. Your score will be determined by your TA, both as a function of your attendance and your participation. This will require you to come to section having already done the assigned readings and with prepared questions in mind. Your TAs are there to assist you but they rely on you to know what you need assistance with.

There will be three problem sets, due October 14, October 23 and December 4. The first two sets are worth 5% of the total grade and the third is worth 10%. The problem sets will be due at the beginning of lecture on the specified dates. You must turn in a hard copy at that time. Late work is strongly discouraged. Late assignments will be graded but can only receive a maximum grade of 50% if you get it in within five days of the due date. After five days, no late work will be accepted. The problem sets will cover the majority of the material on which you will be tested in the following week. These problem sets are your best opportunity to gain practical knowledge of the techniques, mechanisms, and lessons we will be covering. The problem sets will be released well in advance of the due date, so that you have time to discuss any questions you have with your TA or me. Note, however, that neither your TA nor I will simply give you the answers. Instead, we will try to help you understand the logic of the underlying problem, so that you can find the answer yourself.

In general, late work will not be excused and make up exams will not be offered. Only in the case of an extraordinary situation or emergency will late work be graded for full credit or a make up exam be scheduled. Proof of the extraordinary circumstance will be required. If you require a special accommodation, you must speak to your TA at least one week before the exam date.

If you feel any assignment has been graded incorrectly, you may request a regrade. You will have to provide a cover letter explaining why you feel a regrade is required. I will regrade the entire assignment and your revised grade may be higher or lower than your original grade.

Course Resources

There is one required textbook for the course: Analyzing Politics: Rationality, Behavior, and Institutions Second Edition by Kenneth Shepsle. Other required readings, handouts, problem sets, solution sets, and lecture slides will be posted on Learn@UW. I strongly recommend you read the assigned readings before lecture. Students can get lost in the readings for this material, but lecture can clear up a lot of those questions. The often abstract nature of this material can become more confusing if it is first introduced during lecture and students are forced to turn to an impersonal reading to clear up questions.

Not required, but recommended, is Dixon, Skeath, and Reiley’s Games of Strategy, Third Edition. Required chapters from this text are posted online, so you don’t need to buy it, however it goes into greater detail on the more technical aspects of this course. Futhermore, it will provide a firmer foundation for those of you who continue to pursue game theory and formal logic in your undergraduate and graduate careers.

Academic Integrity

I have zero tolerance for any instance of cheating on an exam or any other academic misconduct. Please review UW-Madison policy and procedure for academic misconduct at http://students.wisc.edu/doso/docs/UWS14.pdf. If you cheat, the least I will do is fail you.
Disabilities

I will make every effort to accommodate students with disabilities or special needs. Please get in contact with me as soon as possible to make arrangements if you have a special need. Information about students will be limited to a need to know basis and your confidentiality will be guarded as much as possible. For more information on University policy and procedures, contact the McBurney Disability Resource Center, 1305 Linden Drive, 608.263.2741, or visit [http://www.mcburney.wisc.edu](http://www.mcburney.wisc.edu).

Schedule

Note: Readings marked by asterisks are posted on Learn@UW.

September 2: Course Overview
Shepsle Ch. 1

Individual Choice

September 4: Individual Rationality and the Paradox of Voting
Shepsle p. 18-29

September 9: Expected Utility, the Entebbe Raid, and the Limits of Rationality
Shepsle p. 29-34


Social Choice

September 11: Rules of Preference Aggregation
Shepsle Ch. 3 and 7

September 16 and 18: Arrow’s Theorem
Shepsle Ch. 4

September 23: Sophisticated Voting and Segregation
Shepsle Ch. 6
September 25: Agenda Manipulation and Civil Rights
*Ch. 2 in Riker

Spatial Models
September 30 and 2: Spatial Models, Median Voter Theorem, and Agenda Control
Shepsle p. 90-99, 110-138

October 7: Multidimensional Models and McKelvey’s Chaos Theorem
Shepsle p. 99-110, 138-144

Game Theory
October 9 and 14: Introduction to Game Theory, Dominance and Nash Equilibria
Shepsle p.231-241, 245-253
*Dixit, Skeath, and Reiley Ch. 4, skip section 5

Problem Set 1 Due

October 16: Common Normal Form Games

October 21 and 23: Mixed Strategy Nash Equilibrium and Terrorism
*Dixit, Skeath, and Reiley Ch. 7

Problem Set 2 Due

October 28: Review

October 30: Midterm Exam

Extensive Form Games
November 4 and 6: Extensive Form Games, Subgame Perfect Nash Equilibria, and Nuclear Deterrence
*Dixit, Skeath, and Reiley Ch. 3

Collective Action
November 11: The Logic of Collective Action
Shepsle Ch. 9
November 13: The Tragedy of the Commons

Shepsle Ch. 10

November 18: Repeated Games, Cooperation, and the Environment

Shepsle p. 241-245

*Dixit, Skeath, and Reiley p. 397-409.


Delegation

November 20 and 25: Delegation: Agencies and Legislatures

Shepsle Ch. 13-14

November 27: Thanksgiving

Learning and Imperfect Information

December 2: Bayes Rule and Learning

December 4: Imperfect Information and the Cuban Missile Crisis

*Dixit, Skeath and Reiley Ch. 9


Problem Set 3 Due

December 9: Spillover Time or Advanced Topics

Readings TBA

December 11: Review

December 19: 2:45-4:45 Final Exam