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 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 achieved 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 briefly 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

- Two Midterms 40% (20% Each)
- Final Exam 30%
- Four Problem Sets 20% (5% Each)
• Section Participation 10%

There will be three exams, which will make up the majority of the total grade for this course. The first midterm exam will take place on February 18 and is worth 20% of the overall grade. The second midterm will take place on April 8 and is worth 20% of the overall grade. The final will be on May 12 and is worth 40% of the overall grade. The final will be cumulative, although it will focus more on content which will be presented after the second midterm. All exams will be closed book. Students may not use materials other than a non-graphing calculator or pencil/pen unless they have a special need.

In order to perform well on the exam, you must both attend section and complete the assigned problem sets. Section participation and attendance 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 four problem sets, due February 11, March 25, April 20 and May 4. Each problem set is worth 5% of the overall grade. 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 four days of the due date. After four 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.

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. Furthermore, 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](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.

**January 21: Course Overview**

Shepsle Ch. 1

**Individual Choice**

**January 26: Individual Rationality and the Paradox of Voting**

Shepsle p. 18-29


**January 28: Expected Utility, the Entebbe Raid, and the Limits of Rationality**

Shepsle p. 29-34


**Social Choice**

**February 2: Rules of Preference Aggregation**

Shepsle Ch. 3 and 7

**February 7 and 9: Arrow’s Theorem**

Shepsle Ch. 4

**February 11: Sophisticated Voting and Segregation**

Shepsle Ch. 6


**Problem Set 1 Due**
February 16: Agenda Manipulation and Civil Rights
*Ch. 2 and 7 in Riker

February 18: Midterm 1

Spatial Models
February 23 and 25: Spatial Models, Median Voter Theorem, and Agenda Control
Shepsle p. 90-99, 110-138

March 2 and 4: Multidimensional Models and McKelvey’s Chaos Theorem
Shepsle p. 99-110, 138-144

Game Theory
March 9 and 11: Introduction to Game Theory and Nash Equilibria
Shepsle p. 231-241, 245-253
*Dixit, Skeath, and Reiley Ch. 4, skip section 5

March 16: Common Normal Form Games

March 18 and 23: Mixed Strategy Nash Equilibrium
*Dixit, Skeath, and Reiley Ch. 7, skip section 2c

March 25: Strategy in Terrorism and Profiling

Problem Set 2 Due

March 30 and April 1: Spring Break

Extensive Form Games
April 6: Introduction to Extensive Form Games
*Dixit, Skeath, and Reiley Ch. 3
April 8: Midterm Exam 2

April 13: Extensive Form Games and Continuous Choice

April 15: Nuclear Deterrence

Collective Action

April 20: The Logic of Collective Action

Shepsle Ch. 9

*Problem Set 3 Due*

April 22, 27 and 29: Repeated Games, Cooperation, and the Tragedy of the Commons

Shepsle p. 241-245


Incomplete Information

May 4: Games of Incomplete Information

*Dixit, Skeath and Reiley Ch. 9

*Problem Set 4 Due*

May 6: Incomplete Information Continued and Wrap Up

May 12: 2:45-4:45 Final Exam