An Introduction to Rational Choice

This class introduces students to rational choice theory. Our emphasis will be on how rational choice theory applies to domestic and international politics, with a lot of examples. Nevertheless, the material should be of interest to graduate students in public administration, economics, law, and other social sciences as much as it is for students in international affairs and political science. No prior knowledge of the subject is needed. However, I will assume that students have sufficient aptitude for abstract reasoning and enough high school algebra to move at a fairly quick pace. Required readings are followed by recommended readings to allow the go-getters to read in more detail.

After a brief introduction, we will turn our attention to social choice theory and several of the conundrums that it presents. We will ask whether we can establish fair democratic procedures and if so, which procedures are the fairest. Next, we will introduce game theory and its application to competition between Federalists and Antifederalists, Marbury v Madison, the Cuban Missile Crisis, collective action problems, and voter turnout and the political machines. Students will learn how to solve sequential and simultaneous games, n-player games, and get a taste of games with imperfect information. The third section of the course introduces students to the median voter theorem and how this model applies to studies of presidential veto power, decisions in the Supreme Court, and Downs theory of mass elections. We will then extend our single dimensional model to multiple dimensions and learn anomalies such as McKelvey’s Chaos Theorem. These models will then be applied to vote trading in the Election of 1824 and pivotal voters at the Constitutional Convention. In the end, students should acquire a good introduction to the theory and applications of rational choice theory – with lots of examples which should help you appreciate its importance.

Grading

Your grade consists of four homework assignments and one five-page research paper. All of these assignments will be posted on my web page <http://spia.uga.edu/faculty_pages/dougherk/>, not e-commons. The homework assignments will help you practice the analytical techniques introduced in class and are typically the best way to learn the material. Each is worth 20% of your overall grade. The purpose of the paper is to help you work on a model that you might use in part of your own research. If you don’t have such an idea, you may write on any “approved” topic directly related to the course. I will offer suggestions later in the semester.

All academic work must meet the standards contained in “A Culture of Honesty.” Students are responsible for informing themselves about these standards before performing academic work. The penalties for academic dishonesty are severe and ignorance is not an acceptable defense. Also note that the course syllabus is a general plan for the course and that deviations announced to the class by the instructor may be necessary.
<table>
<thead>
<tr>
<th>Homework Assignment</th>
<th>Date</th>
<th>Percent of Grade</th>
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<tbody>
<tr>
<td>HOMEWORK 1 (social choice)</td>
<td>Jan 31</td>
<td>20%</td>
</tr>
<tr>
<td>HOMEWORK 2 (game theory)</td>
<td>Feb 14</td>
<td>20%</td>
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<tr>
<td>HOMEWORK 3 (incomplete &amp; n-player games)</td>
<td>Mar 7</td>
<td>20%</td>
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<tr>
<td>HOMEWORK 4 (repeated games &amp; spatial voting)</td>
<td>Apr 11</td>
<td>20%</td>
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<tr>
<td>RESEARCH PAPER</td>
<td>Apr 25</td>
<td>20%</td>
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**Make-ups**

Homework assignments require a fair amount of analysis time. Please plan ahead to avoid turning them in late. **Late assignments will be lowered one letter grade for every working day they are late.** If an assignment is late, it would be a good idea to stick it under my office door (Baldwin 408) as soon as possible to avoid any unnecessary late penalties. Grades are lowered for every working day they are late, not every class day they are late. Please plan ahead.

**Required Texts**

We will read both theoretical and substantive works in this course which vary in length. Because most learning occurs when you solve problems on your own, you might want to read the theoretical works slower and use a pencil and paper to work out the logic behind the material. I also included a few recommended readings which should help you understand the material from a different angle. Try those when something seems confusing or you want to go more in depth.

The following required books can be purchased from the campus book store.


4. Additional chapters and articles will be in the dropbox set up for the course. They are marked with DB below. I will send you directions on how to sign up for dropbox to your uga email address shortly after the class begins. It’s free. If any of the electronic readings require a password, it will be “dougherty”, all lower case.

**Schedule of Topics and Readings**

note:  
[ + ] = difficult, but technically correct.  
[ - ] = easier to understand.  
[ & ] = application to a substantive area.
I. INTRODUCTION

Jan 10 Introduction to Logic

Required:
*Introduction to Propositional Logic* (watch a couple in the series).
*A test of what you know.*

Recommended:
*A little more on-line logic.*

II. SOCIAL CHOICE THEORY

Jan 17 Snow Day! No Class

Jan 24 Decision Theory and Problems with Preference Aggregation

Required:
*Sen, Collective Choice and Social Welfare*, Chs 1-4 (starred sections are totally optional. I included them in case you want to go in depth), DB.
*Kurrild-Klitgaard, Trump, Condorcet and Borda: Voting paradoxes in the 2016 Republican presidential primaries, DB

Recommended:

III. GAME THEORY

Jan 31 Games with Sequential Moves

Required:
*Dixit, Reiley, and Skeath*, Ch 2, “How to Think About Strategic Games” and Ch 3, “Games with Sequential Moves.”
Recommended:

Feb 7  Games with Simultaneous Moves

Required:
*Dixit, Skeath, and Reiley, Ch 4, “Simultaneous Move Games: Discrete Strategies”

Recommended:
Dixit, Reiley, and Skeath, Ch 5 “Simultaneous Move Games with Pure Strategies II” and Ch 6, “Combining Sequential and Simultaneous Moves.”
Recommended books from last week.

Feb 14  Applications: Reform in Latin America and Marbury v Madison

Required:

Feb 21  Incomplete Information Games: The Cuban Missile Crisis

Required:
Dixit, Reiley, and Skeath, Ch 9, “Uncertainty and Information,” and Ch 14, “Brinkmanship: The Cuban Missile Crisis.”

Recommended:


**Feb 28**

**Collective Action, N-Player Games, and International Alliances**

**Required:**

* Dixit, Reiley, and Skeath, Ch 11, “Collective Action Games.”


**Recommended:**


Mar 7  Application: Voter Turnout and the Political Machines

Required:

Recommended:

Mar 14  No Class. Spring Break!

Mar 21  Repeated Games

Required:
*Dixit, Skeath, and Reiley, Ch 10, “The Prisoners’ Dilemma and Repeated Games.”

Recommended:

III. SINGLE DIMENSIONAL SPATIAL VOTING

Mar 28  The Median Voter Theorem

Required:
*Munger and Munger, Choosing in Groups, Ch 5, “Politics as Spatial Competition.”

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*Poole, Keith and Howard Rosenthal, 1997. \emph{Congress: A Political-Economic Theory of Roll Call Voting}, Ch 2, DB.

Recommended:
Black, Duncan. 1951. \emph{Theory of Committees and Elections}. London: William Hodge [-].
Gerald Strom. 1990. \emph{The Logic of Lawmaking: a Spatial Theory Approach}. Baltimore: Johns Hopkins [-, &].
Stewart, Charles. 2001. \emph{Analyzing Congress}. New York: W.W. Norton [-, &].

\textbf{Apr 4 Application: Pivotal Politics}

Required:
*Krehbiel, Keith. 1998. \emph{Pivotal Politics}, Ch 3, “Gridlock,” DB.
*Bonneau, Chris et. al. 2007 “Agenda Control, the Median Justice, and the Majority Opinion on the U.S. Supreme Court” \emph{AJPS} 51: 890-905, DB.

Recommended:

\textbf{IV. MULTIDIMENSIONAL SPATIAL VOTING}

\textbf{Apr 11 The Chaos Theorem & Empirical Estimates of Ideal Points}

Required:
*Munger and Munger, \emph{Choosing in Groups}, Ch 6, “Two Dimensions: Elusive Equilibrium.”
*Poole, Keith. 2000. “Non-Parametric Unfolding of Binary Choice Data.” *Political Analysis* 8: 211-237, DB.

**Recommended:**

**Apr 18** **Bargaining Theory**

**Required:**

**Recommended:**
Apr 25 Application: Cycles at the Constitutional Convention and The Election of 1824.

Required:

Recommended: