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 many 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 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 Marbury v Madison, the Cuban Missile Crisis, collective action problems in alliances, 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 the model applies to studies of presidential veto power, decisions in the Supreme Court, and Downs’ model 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 vote cycles 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 in various areas to help you appreciate its importance.

Polling
I will try to use Google Forms for in-class polling. That means you will login to a form to pick an answer. I will not know who answered the question nor get a record of individual responses. However, Google Forms will show us how the group responded in real time. The Google Form login is https://forms.gle/M2sePUH1oecuCyTR7. Please keep it in a handy location.

Mental Health and Wellness Resources
If you or someone you know needs assistance, you are encouraged to contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or visit https://sco.uga.edu. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.

UGA has several resources for a student seeking mental health services or crisis support. If you need help managing stress anxiety, relationships, etc., please visit BeWellUGA for a list of FREE
workshops, classes, mentoring, and health coaching led by licensed clinicians and health educators in the University Health Center. Additional resources can be accessed through the UGA App.

Grading
Graduate students should focus on learning, not on grades. Nevertheless, your grade consists of five homework assignments worth 90% of your grade and a Perusall grade worth 10%. Perusall is a social e-reader which encourages you to discuss the readings with other students as you read. Your composite Perusall grade will be based on your reading and commenting on each assigned reading, i.e., you contribute toward it each week.

Perusall: All “required” readings are posted on Perusall – a social e-reader which encourages you to discuss the readings with other students. You can look up recommended readings on your own. Each reading in Perusall is considered an assignment that you read, question, and comment on, worth 10% of overall your grade. Students often ask, “how does Perusall grade me?” The answer is it grades reading and discussion. Focus on “discussion,” not posting, and pay attention to its nudges to get full points. Note, each assignment (a.k.a., each reading) should be completed before the relevant class. To find the Perusall reading, click on the Perusall link in ELC.

Homeworks: I will drop your two lowest homework grades, then assign the average of the remaining three grades as your overall homework grade. These assignments will be posted on eLC. The homework assignments will help you practice the analytical techniques introduced in class and are typically the best way to learn the material. You must attempt to work through as much of the homeworks as possible on your own, and then work with other students only when you are stuck or want to check your answers. That will help you learn. Furthermore, write up your own answers neatly, using your own words, derivations, and explanations. You will probably have to re-write your homeworks before turning them in.

Honor Code: 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>Assignment</th>
<th>Due Date</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perusall</td>
<td>weekly</td>
<td>10%</td>
</tr>
<tr>
<td>Homework 1 (social choice)</td>
<td>Jan 29</td>
<td>90%</td>
</tr>
<tr>
<td>Homework 2 (game theory)</td>
<td>Feb 12</td>
<td></td>
</tr>
<tr>
<td>Homework 3 (incomplete &amp; N-player Games)</td>
<td>Mar 18</td>
<td></td>
</tr>
<tr>
<td>Homework 4 (repeated games)</td>
<td>Mar 25</td>
<td></td>
</tr>
<tr>
<td>Homework 5 (spatial voting)</td>
<td>Apr 29</td>
<td>v</td>
</tr>
</tbody>
</table>
I generally think of 90-100 as an A, 80-90 as a B, etc., but since the university uses a plus minus system I use the following scale for overall grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>92 or above</td>
<td>A–</td>
<td>90-91.99</td>
</tr>
<tr>
<td>B+</td>
<td>88-89.99</td>
<td>B</td>
<td>82-87.99</td>
</tr>
<tr>
<td>C+</td>
<td>78-79.99</td>
<td>C</td>
<td>72-77.99</td>
</tr>
<tr>
<td>F</td>
<td>59.99 or below</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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 day they are late.** If an assignment is late, upload it on ELC, then send me an email noting that it is posted. Please plan ahead to avoid unnecessary late penalties.

**Readings**

All readings will be on Perusall (see above). 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 of the argument. 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 more depth.

If you want to purchase books, in addition to reading them on Perusall, you can buy the following from the bookstore.


Schedule of Topics and Readings

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

I. INTRODUCTION

Jan 8  Introduction to Logic

Strongly Recommended:
*Introduction to Propositional Logic (watch a couple in the series).
Recommended:
*Truth tables by Oscar Levin – practice some before looking at answers.
*More truth tables.

Jan 15  No Class. MLK Day!

II. SOCIAL CHOICE THEORY

Jan 22  Problems with Preference Aggregation

Required:

Recommended:
Dixit, Skeath and McAdams, Ch 16, “Strategy and Voting” Games of Strategy, 5th edition (pp. 627-652, stop at MVT) [-].

**III. GAME THEORY**

**Jan 29**  Games with Sequential Moves

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

**Recommended:**

**Feb 5**  Games with Simultaneous Moves

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

**Recommended:**
Dixit, Skeath and McAdams, Ch 5 “Simultaneous Move Games: Continuous Strategies, Discussion, and Evidence” and Ch 6, “Combining Sequential and Simultaneous Moves.”
Recommended books from last week.

**Feb 12**  Applications: Reform in Latin America and Marbury v Madison

**Required:**
Feb 19  Incomplete Information Games: The Cuban Missile Crisis

Required:
* Dixit, Skeath and McAdams, Ch 9, “Uncertainty and Information.”
* Dixit, Skeath and McAdams, Ch 13, “Brinkmanship: The Cuban Missile Crisis.”

Recommended:

Feb 26  N-Player Games and International Alliances

Required:
* Dixit, Skeath and McAdams, Ch 11, “Collective Action Games.”

Recommended:


**Mar 4**  
**No Class! Spring Break**

**Mar 11**  
**Application: Political Machines**

**Required:**

**Recommended:**
Mar 18  Repeated Games

Required:
*Dixit, Skeath and McAdams, Ch 10, “The Prisoners’ Dilemma and Repeated Games.”
*Discount Factors (video)
*Geometric Series and Infinite Payoffs (video)

Recommended:

III. SINGLE DIMENSIONAL SPATIAL VOTING

Mar 25  The Median Voter Theorem

Required:
*Hinich and Munger, Ch 2, “The Spatial Model of Downs and Black,” Analytical Politics.
*Bonneau, Chris et. al. 2007 “Agenda Control, the Median Justice, and the Majority Opinion on the U.S. Supreme Court” AJPS 51: 890-905.

Recommended:

Apr 1  Application: Pivotal Politics

Required:

Recommended:


**Apr 8** Application: Downs’ Model of Popular Elections

**Required:**
*The 2020 Election (ballotpedia), also consider wikipedia
*The 2024 Election (ballotpedia), also consider wikipedia

**Recommended:**


**IV. MULTIDIMENSIONAL SPATIAL VOTING**

**Apr 15** The Chaos Theorem

**Required:**
*Stewart, *Analyzing Congress*, Chapter 1 (pp. 33-35).

**Recommended:**


9


**Apr 22 The Core and Stopping Rules in Committees**

**Required:**


**Recommended:**


Apr 29  Application: Cycles at the Constitutional Convention and The Election of 1824.

Required:

Recommended: