

POLS 4071  
Tues & Thurs, 2:20-3:35 p.m.  
Baldwin 102  
Spring, 2025

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## **Social Choice and Elections**

Social Choice examines the structure of a fair voting system based on the preferences of individuals. Think of it as examining how a constitution could be engineered to satisfy certain democratic principles. These principles have to be mathematically consistent or they won't work. The problem is pertinent to the creation of new governments, such as those after the Arab spring. Studying social choice should help students think about democracy analytically, objectively, and deeply.

We will ask how new democracies should structure their elections. Is proportional representation or voting in a single member districts more appropriate? What are the paradoxes of apportionment? Why do candidates always tend to be centrists in two party elections? Do the rules of a democratic process affect political outcomes, and if so, how? What kinds of systems, be they for electing national leaders or student council presidents, go furthest toward truly representing the wishes of the voters? What concepts of liberty are consistent with democracy and how might they conflict? These classic questions will be analyzed using formal analytical techniques – that is, using some simple logic and mathematics. Although we will go deeply, no prior understanding of formal theory or economic reasoning is required to master this course.

### Polling

Occasionally, I will 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 what nor record individual responses. However, Google Forms will allow us to see how the class responds in real time. I will provide QR-Codes for the polls. If you can't scan it, the Google Form login is <https://forms.gle/fJTbrTY3H2daXXUbA>, which you might keep in a handy place.

### Grading

Your grade consists of discussing readings in perusal, three homework assignments, a mid-term exam, and a final exam. I expect students to attend class and assume that you are mature enough to understand what happens when you miss class. Ask another student for notes if you are absent. All assignments are posted on eLC.

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:

B+	88-89.99	A	92 or above	A-	90-91.99
C+	78-79.99	B	82-87.99	B-	80-81.99
D+	68-69.99	C	72-77.99	C-	70-71.99
F	59.99 or below	D	62-67.99	D-	60-61.99

### Perusall and Readings

All required reading assignments are posted on [Perusall](#) – a social e-reader which you can use for free. Perusall gets you to discuss the readings with other students. Each reading is considered an assignment that you read, question, and comment on. 10% of your grade will be based on your Perusall discussions. Students often ask, “how does Perusall grade me?” The simple 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, which you can get to by clicking on the Perusall link in ELC.

### Home Work Assignments

You will be assigned three homework assignments, each worth 10% of your grade. These assignment will help you practice the analytic skills taught in the course and help you prepare for the exams. Assignments will be posted on-line at least one week before they are due. Please remind me if they don't get posted.

### Exams

Most of your grade will come from a mid-term exam and a final exam. Both may contain multiple choice, fill in the blank, problem solving, and essay type questions worth 30% of your grade each. A review sheet for each will be posted on eLC. The final is *not* cumulative. It only covers the material from the first day after the midterm to the end. Note: some questions may come from the readings not covered in lecture, so working in Perusall should pay off. You might also want to work on the starred problems in the Hodge and Kilma chapters – the most important questions are listed in the practice problems section on eLC.

### 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 and will not be accepted after the next class begins**, so folks can get their homeworks back in a timely fashion. If an assignment is late, it would be a good idea to e-mail it to me <dougherk@uga.edu> as soon as possible to avoid any unnecessary late penalties. If an assignment is late, upload it on ELC then email me so I know it is posted. Grades are lowered for every *day* they are late, not every class day they are late.

If you miss the midterm for a good reason, such as coming down with COVID, and your excuse is ***pre-approved*** by me, you will be allowed to complete a make-up exam at 4 pm on Thursday,

February 13, meeting in Baldwin 408. Make-ups are not available any other time or date. They are more difficult than regular exams and should be avoided.

	<u>Date</u>	<u>Percent of Grade</u>
PERUSALL (reading and discussions)	daily	10%
HOMEWORK 1 (apportionment)	Jan 28	10%
MIDTERM EXAM	Feb 11	30%
HOMEWORK 2 (voting rules)	Mar 20	10%
HOMEWORK 3 (liberty)	Apr 22	10%
FINAL EXAM	May 1	30%

#### Student Honesty

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.

#### AI Software

The use of artificial intelligence (AI) tools like ChatGPT, Copilot, or similar generative AI systems is strictly prohibited in this course for any part of an assignment, including brainstorming, writing, or editing. This policy facilitates your learning of social choice, which at times requires struggling.

#### 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.

#### Practice Problems

The best way to learn this type of material is to solve problems on your own. The Hodge and Kilma text (on Perusall) is full of questions you can work through, with the answers to starred questions listed at the end of each chapter. I recommend you work out the problems listed under “practice problems” on eLC. It will help. Most of the readings are short but may require more than one read to be fully comprehended. If you work hard, complete all the readings, and keep up with the practice problems, this should be a very rewarding course.

If you want a hard copy of the Hodge and Kilma book, it is available at the bookstore.

Hodge, Jonathan K. and Richard E. Klima. 2018. *The Mathematics of Voting and Elections: a hands-on approach*, 2<sup>nd</sup> edition. American Mathematical Society.

### Disclaimer

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

### Schedule of Topics and Readings

#### **I. INTRODUCTION**

Jan 7            **Introduction**

Jan 9            **Electoral Systems Around the World**  
\*David Farrell, (2001) *Electoral Systems*, pp. 1-12.

#### **II. PROPORTIONAL REPRESENTATION**

Jan 14           **Paradox of Apportionment**  
\*Hodge and Kilma, Ch 11, “Proportional (Mis)representation”

Jan 16           *\*Recommended:* Balinski and Young, 2001, *Fair Representation*. Washington, D.C.: Brookings Institution Press – on course reserve.

Jan 21           *\*Dougherty, Ch 2, “Theory” and Ch 5, “The Antebellum Period,” Shifting Seats.*

#### **III. PLURALITY RULE AND POPULAR ELECTIONS**

Jan 23-28       **The Median Voter Theorem**  
\*Hinich and Munger, Ch 2, “The Spatial Model of Downs and Black,” *Analytical Politics*.

Jan 30           **May’s Theorem**  
\*Hodge and Kilma, Ch 1, “What’s So Good about Majority Rule?”  
\*Mueller, “May’s theorem on Majority Rule,” *Public Choice III* – the correct statement of May’s theorem.

Feb 4            **The Downsian Voter**  
\*Downs, Anthony 1957. “An Economic Theory of Political Action in a Democracy,” *Journal of Political Economy*, 65(2): 135-150.  
\*2024 election ([click here](#))

Feb 6 Catch-up and Review

**Feb 11 MIDTERM EXAM.**

#### **IV. PROBLEMS WITH VOTING RULES**

##### **Plurality Rule and Pairwise Majority Rule**

Feb 13 \*Scientific America, “Ranking Candidates Is More Accurate Than Voting,”  
October 6, 2008.

\*Hodge and Kilma, Ch 2, “Le Pen, Nader, and Other Inconveniences”

Feb 18 \*Hodge and Kilma, Ch 3, “Back into the Ring”

##### **Other Voting Rules**

Feb 20-25 \*NPR News, “Ranked-Choice Voting Gets A Prime-Time Shot Under New York  
City's Bright Lights,” June 23, 2021.

\*The Center for Elections Science, “The Limits of Ranked-Choice Voting,”  
February 7, 2019.

##### **Arrow’s Impossibility Theorem**

Feb 27 \*Hodge and Kilma, Ch 4, “Trouble in Democracy” – a rough idea of Arrow’s  
theorem. Focus on the strong form.

Mar 3-7 *No class. Spring Break.*

Mar 11 \*Sen, Amartya “Collective Rationality,” *Collective Choice and Social Welfare*,  
Ch 3, pp. 33-40 – the correct statement of Arrow’s theorem.

##### **Ways out of Arrow’s Theorem**

Mar 13 \*Hodge and Kilma, Ch 5, “Explaining the Impossible.”

\*Vickrey, William, “Utility, Strategy, and Social Decision Rules,” in Brian Barry  
and Russell Hardin Eds. *Rational Man and Irrational Society*, pp. 343-  
353.

\*Recommended: Russell Hardin, “Public Choice Versus Democracy” in Copp,  
Hampton, and Roemer eds., *The Idea of Democracy*, pp. 157-172 – on  
eLC.

##### **The Probability of Violating Voting Criteria**

Mar 18-20 \*Dougherty and Heckelman, “The Probability of Violating Arrow’s Conditions,”  
*European Journal of Political Economy*.

Mar 25-27 \*Dougherty and Edward, Ch 6, “Electoral Decision Making,” *The Calculus of  
Consent and Constitutional Design*.

## V. LIBERTY AND DEMOCRACY

### **Liberty**

Apr 1 \*Sen, “Markets and Freedoms,” *Oxford Economic Papers*, focus on sections 3-5 (pp. 522-532), skim rest.

Apr 3 *No class. Southwestern Social Science Association Meetings.*

Apr 8 \*Sen, “Markets and Freedoms,” continued.

### **Sen’s Liberal Paradox**

Apr 15-17 \*Sen, “The Impossibility of a Paretian Liberal” *The Journal of Political Economy*.

### **Ways out of Sen’s Paradox**

Apr 22 \*Saari, Donald, *Decisions and Elections*, chapter 2 (pp. 56-67).

*\*Recommended:* Sen, Amartya, “Liberty, Unanimity, and Rights,” *Economica*, 43(171): 217-245 – on eLC. The reading introduces several criticisms of Sen’s paradox as well as Sen’s response to them.

Apr 24 Catch-Up & Review

May 1 FINAL EXAM: 3:30-5:30 pm (same location).