

POLS 4071
Tues & Thurs, 2:20-3:35 p.m.
Baldwin 102
Fall, 2022

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Social Choice and Elections

The field of 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 with one another 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

As a bit of an experiment, 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 a 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/ZWoRTEKp2fZ6Uoyd8>. Please keep it in a handy location.

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 with a two-day grace period for my soft heart. See the course overview in eLC for details on how to sign up for Perusall.

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

The preponderance 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 the Perusall time 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 *working* day they are late and will not be accepted later than two *working* days after the due date**, 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. Grades are lowered for every *working day* they are late, not every class day they are late.

If you miss the midterm or final exam 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. The make-up for the midterm will be at 4 pm on September 27, meeting in Baldwin 408. The make-up for the final will be at 4 pm on December 15, meeting in Baldwin 408. Make-ups are not be 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)	Sept 13	10%
MIDTERM EXAM	Sept 22	30%
HOMEWORK 2 (voting rules)	Oct 27	10%
HOMEWORK 3 (liberty)	Nov 22	10%
FINAL EXAM	Dec 17	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.

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.

Readings

All readings will be made available through Perusall. 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. Starred questions are answered at the end of each chapter. I recommend you work out each of those on your own. It will help. Most of the readings are shorter but

analytical, which may require more than one read to be fully comprehended. Remember, if you work hard and complete all the readings, 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*, 2nd 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

Aug 18 **Introduction**

Aug 23 **Electoral Systems Around the World**
*David Farrell, (2001) *Electoral Systems*, pp. 1-12.

II. PROPORTIONAL REPRESENTATION

Aug 25 **Paradox of Apportionment**
*Hodge and Kilma, Ch 11, “Proportional (Mis)representation”

Aug 30 *Recommended: Balinski and Young, 2001, *Fair Representation*. Washington, D.C.: Brookings Institution Press – on course reserve.

III. PLURALITY RULE AND POPULAR ELECTIONS

Sept 1-6 **The Median Voter Theorem**
*Hinich and Munger, Ch 2, “The Spatial Model of Downs and Black,” *Analytical Politics*.

Sept 8 **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*.

Sept 13 **The Downsian Voter**
*Downs, Anthony 1957. “An Economic Theory of Political Action in a Democracy,” *Journal of Political Economy*, 65(2): 135-150.

*Hinich and Munger, *Analytical Politics*, Ch 6, “Uncertainty and Policy Preference.”

Application: U.S. Presidential Elections

- Sept 15 *2008 election ([click here](#))
*2016 election ([click here](#))
*2020 election ([click here](#))

Sept 16 CONSTITUTION DAY

*5 extra credit points on your second homework assignment for [attending](#). If you can't make the lecture but want the extra points, please email me a one page summary of Thomas Jefferson's role in creating the Constitution by 5 pm Saturday, Sept 17.

Sept 20 Catch-up and Review

Sept 22 MIDTERM EXAM.

IV. PROBLEMS WITH VOTING RULES

Plurality Rule and Pairwise Majority Rule

- Sept 27 *Scientific America, “Ranking Candidates Is More Accurate Than Voting,” October 6, 2008.
*Hodge and Kilma, Ch 2, “Le Pen, Nader, and Other Inconveniences”

Sept 29 *Hodge and Kilma, Ch 3, “Back into the Ring”

Other Voting Rules

- Oct 4-6 *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

Oct 11 *Hodge and Kilma, Ch 4, “Trouble in Democracy” – a rough idea of Arrow's theorem. Focus on the strong form.

Oct 18 *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

Oct 20 *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

Oct 25-27 *Dougherty and Heckelman, "The Probability of Violating Arrow's Conditions," *European Journal of Political Economy*.

Nov 1-3 *Dougherty and Edward, Ch 6, "Electoral Decision Making," *The Calculus of Consent and Constitutional Design*.

V. LIBERTY AND DEMOCRACY

Liberty

Nov 8-10 *Sen, "Markets and Freedoms," *Oxford Economic Papers*, focus on sections 3-5 (pp. 522-532), skim rest.

Sen's Liberal Paradox

Nov 15-17 *Sen, "The Impossibility of a Paretian Liberal" *The Journal of Political Economy*.

The Probability of Sen's Paradox

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

Nov 24 **No Class! Thanksgiving Break**

Nov 29 *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.

Dec 1 Catch-Up & Review

Dec 13 FINAL EXAM: 3:30-5:30 pm (same location).