

# PHIL 309P: Methods in Philosophy, Politics and Economics: Individual and Group Decision Making

Instructor:	Eric Pacuit (pacuit.org)
Semester:	Fall 2019
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Course Website:	TBA
Office:	Skinner 1103A
Office Hours:	TBA
Class Times:	TBA
Class Location:	TBA

## Course Description

This course introduces students to the basic concepts and techniques used in philosophical and economic analyses of individual and group decision making. Students will study the main foundational issues that arise when studying mathematical models of individual and group decision making, and explore key applications of these mathematical models in philosophy, politics and economics.

The first part of the course is focused on rational choice theory. Students will explore the relationship between instrumental rationality and formal utility theory, discuss different conceptions of preference and utility, and examine objections to the standard model of rational choice. Topics include ordinal and cardinal utility theory (including the von Neumann-Morgenstern Representation Theorem and a brief discussion of Savage's Representation Theorem), the Allais paradox, the Ellsberg paradox, causal and evidential decision theory (i.e., different reactions to Newcomb's paradox), a brief introduction to game theory and the Prisoner's dilemma, rationality of the Nash equilibrium, debates about backward induction, and the Sleeping Beauty/Absent-Minded Driver Problem.

The second part of the course will introduce students to the ways in which formal models of rational choice have been applied to issues in social and political philosophy. The course will examine both the formal aspects of social choice and their applications to democracy. Topics include voting methods, voting paradoxes, May's Theorem, Arrow's Theorem, strategic voting, judgement aggregation, topics in research on the wisdom of the crowd (e.g., the Condorcet Jury Theorem and the Hong-Page Theorem), Sen's impossibility of the Paretian liberal, interpersonal comparison of utilities and Harsanyi's Theorem.

The course will take various formats during class meetings, including lecture, discussion, working on exercises together, and small group work. The main objective is to train students in the formal thinking and reasoning used in the interdisciplinary research area Philosophy, Politics and Economics.

## Reading Material

The course will be based on readings from various textbooks and journal articles. The relevant material will be made available on the course website. Many of the readings will be chapters from the following textbooks:

- G. Gaus, *On Philosophy, Politics and Economics*, Wadsworth Philosophical Topics, 2008.
- Daniel Hausman, *Preference, Value, Choice and Welfare*, Cambridge University Press, 2012.
- Martin Peterson, *An Introduction to Decision Theory*, 2nd Edition, Cambridge University Press, 2017.
- Julian Reiss, *Philosophy of Economics: A Contemporary Introduction*, Routledge, 2013.

## Tentative Syllabus

Introduction and Course Overview

Lecture dates: Thu 1/25

Reading:

- G. Gaus, *On Philosophy, Politics and Economics*, Chapter 1: Instrumental and Economics Rationality
- I. Gilboa, *Rational Choice*, Chapter 1: Feasibility and Desirability

Part 1: Individual Decision Making

- Preferences, Utility and Choices

Lecture dates: Tue 1/30, Thu 2/1

Reading:

- \* D. Hausmann, *Preference, Value, Choice and Welfare*, Ch. 1: Preferences, Comparative Evaluation and Reasons and Ch. 2: Preference Axioms and their Implications
- \* EP, Notes on preferences, utilities and choices

Additional reading:

- \* G. Gaus, *On Philosophy, Politics and Economics*, Chapter 2, Utility Theory, pp. 30 - 40
- \* I. Gilboa, *Rational Choice*, Chapter 2: Utility Maximization

- Expected Utility and Cardinal Utility

Lecture dates: Tue 2/6, Thu 2/8

Reading:

- \* M. Peterson, *An Introduction to Decision Theory*, Chapter 5: Utility
- \* J. Broome, "Utility", *Economics & Philosophy*, 7:1, 1991, pp. 1 - 12

- Objections to the Standard Model of Rational Choice

Lecture dates: Tue 2/13, Thu 2/15, Tue 2/20

Reading:

- \* J. Reiss, *Philosophy of Economics*, Chapter 3: Rational-Choice Theory, pp. 45 - 53
- \* M. Peterson, *An Introduction to Decision Theory*, Chapter 4: Decisions Under Risk, pp. 80 - 96 and Chapter 9: Causal vs. Evidential Decision Theory

Additional Reading:

- \* G. Gaus, *On Philosophy, Politics and Economics*, Chapter 2: Utility Theory, pg. 50 - 65
- \* R. Briggs, Normative Theories of Rational Choice: Expected Utility, Stanford Encyclopedia of Philosophy  
<https://plato.stanford.edu/entries/rationality-normative-utility/>
- \* A. Sen (1977), Rational Fools: A Critique of the Behavioral Foundations of Economic Theory, *Philosophy & Public Affairs*, 6(4), pp. 317-344

- Brief Introduction to Game Theory and the Prisoner's Dilemma

Lecture dates: Thu 2/22, Tue 2/27

Reading:

- \* G. Gaus, *On Philosophy, Politics and Economics*, Chapter 4: Game Theory
- \* J. Reiss, *Philosophy of Economics*, Chapter 4: Game Theory, pp. 63 - 81
- \* M. Peterson (ed.), *The Prisoner's Dilemma*, Chapter 2: Why all the fuss? The many aspects of the Prisoner's Dilemma by K. Binmore

Additional reading:

- \* M. Peterson (ed.), *The Prisoner's Dilemma*, Chapter 3: Taking the Prisoner's Dilemma seriously: what can we learn from a trivial game? by D. Hausman
- \* M. Peterson (ed.), *The Prisoner's Dilemma*, Chapter 4: Prisoner's Dilemma doesn't explain much by R. Northcott and A. Alexandrova

- Inter-temporal Choice, Debates about Backward Induction, and the Absent-Minded Drivers Problem

Lecture dates: Thu 3/1, Tue 3/6, Thu 3/8

Reading:

- \* EP, Notes on backward induction
- \* P. Pettit and R. Sugden (1989), The Backward Induction Paradox, *The Journal of Philosophy*, 86(4), pp. 169 - 182
- \* W. Schwarz (2015), Lost memories and useless coins: Revisiting the absentminded driver, *Synthese*, 192 (9), pp. 3011-3036

## Part 2: Group Decision Making

- Voting and Social Choice

Lecture dates: Tue 3/13, Thu 3/15

Reading:

- \* Christian List, Social Choice Theory ([plato.stanford.edu/archives/win2013/entries/social-choice/](http://plato.stanford.edu/archives/win2013/entries/social-choice/)), Section 1, The Stanford Encyclopedia of Philosophy, Edward N. Zalta (ed.), 2013.
- \* EP, Voting Methods ([plato.stanford.edu/entries/voting-methods/](http://plato.stanford.edu/entries/voting-methods/)) Stanford Encyclopedia of Philosophy, Edward N. Zalta (ed.), 2011.

Additional reading:

- \* H. Peyton Young. Optimal Voting Rules (1995). *The Journal of Economic Perspectives*, 9:1, pp. 51 - 64.

- May's Theorem and Arrow's Theorem

Lecture dates: Tue 3/27, Thu 3/29, Tue 4/3

Reading:

- \* EP, Notes on the proof of May's Theorem
- \* Christian List, Social Choice Theory ([plato.stanford.edu/archives/win2013/entries/social-choice/](http://plato.stanford.edu/archives/win2013/entries/social-choice/)), Section 2, The Stanford Encyclopedia of Philosophy, Edward N. Zalta (ed.), 2013.
- \* Michael Morreau, Arrow's Theorem ([plato.stanford.edu/entries/arrows-theorem/](http://plato.stanford.edu/entries/arrows-theorem/)), Stanford Encyclopedia of Philosophy, Edward N. Zalta (ed.), 2014.

Additional reading:

- \* M. Fey, A Straightforward Proof of Arrow's Theorem, *Economics Bulletin*, Vol. 34, 2014, pp. 1792-1797

- Strategic Voting (Gibbard-Satterthwaite Theorem)

Lecture dates: Thu 4/5, Tue 4/10

Reading:

- \* A. Taylor, *Social Choice and the Mathematics of Manipulation*, Chapter 2: An Introduction to Manipulability
- \* K. Dowding and M. van Hees (2008). In Praise of Manipulation, *British Journal of Political Science*, 38:1, pp. 1 - 15.

- Social Choice Theory and Democracy - Implications of the Theorems

Lecture dates: Thu 4/12

Reading:

- \* J. Patty and E. Penn, *Social Choice and Legitimacy: The Possibilities of Impossibility*, Chapter 2: The Debates Surrounding Social Choice pp. 26 - 35

\* G. Mackie (2006), The Reception of Social Choice Theory by Democratic Theory

- Judgement Aggregation

Lecture dates: Tue 4/17, Thu 4/19

Reading:

- \* Christian List, Social Choice Theory ([plato.stanford.edu/archives/win2013/entries/social-choice/](http://plato.stanford.edu/archives/win2013/entries/social-choice/)), Section 5 Judgment aggregation, The Stanford Encyclopedia of Philosophy, Edward N. Zalta (ed.), 2013.

- The Condorcet Jury Theorem and Wisdom of the Crowd

Lecture dates: Tue 4/24, Thu 4/26

Reading:

- \* F. Dietrich (2008), The Premises of Condorcet's Jury Theorem Are Not Simultaneously Justified, *Episteme*, 5(1), pp. 56-73
- \* A. Lyon and EP (2013), The Wisdom of Crowds: Methods of Human Judgement Aggregation, in *Handbook of Human Computation*, pp. 599 - 614,
- \* Christian List, Social Choice Theory ([plato.stanford.edu/archives/win2013/entries/social-choice/](http://plato.stanford.edu/archives/win2013/entries/social-choice/)), Section 5 Judgment aggregation, The Stanford Encyclopedia of Philosophy, Edward N. Zalta (ed.), 2013.

- Sen's Impossibility of Paretian Liberal

Lecture dates: Tue 5/1

Reading:

- \* W. Gaertner, *A Primer in Social Choice Theory*, Chapter 4: Individual Rights

Additional reading:

- \* A. Sen (1983), Liberty and Social Choice, *The Journal of Philosophy*, 80(1), pp. 5 - 28

- Interpersonal Comparison of Utilities and Harsanyi's Theorem

Lecture dates: Thu 5/3, Tue 5/8, Thu 5/10

Reading:

- \* M. Resnik, *Choices: An Introduction to Decision Theory*, Section 6-4: Utilitarianism
- \* D. Hausman (1995), The Impossibility of Interpersonal Utility Comparisons, *Mind*, 104(415), pp. 473-490

Additional reading:

- \* M. Peterson, *An Introduction to Decision Theory*, Section 13.4: Harsanyi's Utilitarian Theorems, pp. 301 - 307

## Grading Policy

**To be update before the Fall 2019 version of the course. The previous grade requirements are:** The course requirements are:

- **Participation** (20% of your final grade). Each student will receive a maximum of 20 points for active participating in the course (keeping up with the reading, asking questions, contributing to the discussion, etc.). In addition, students are required to make at least two posts per week to an online discussion board on ELMS:

**Online discussions:** One of the posts must begin an original thread, be at least 150 words in length, and make reference to a specific part of the weekly readings or the slides discussed in class. The other post should be a response to another student's original thread. Weekly posts must be completed by **11:59pm on Friday**, at which time the discussion board will automatically close.

Some guidelines for the discussion board:

- \* Be courteous to your fellow students, and respectful of their opinions.
  - \* Try to find some aspect of the reading that you disagree with and give an argument for why you think it's wrong.
  - \* If you make a claim, make sure to back it up with an argument. Try not to make unsubstantiated declarations without thinking them through.
  - \* Avoid quoting excessively from the assigned text or any other source, but feel free to direct your classmates to other sources.
  - \* Avoid simply agreeing with other students. Your posts should always add something new to the conversation.
  - \* Prepare your posts carefully — don't do them in a rush.
- **Quizzes** (30% of your final grade). A number of quizzes will be given throughout the semester. The quizzes will be either in-class or online. I will generally announce the quizzes either on the website or in class (however, there may be some unannounced in-class quizzes). **The lowest quiz score will be dropped.** Since the quizzes are designed, in part, to encourage attendance and to ensure that students keep up with the reading, **make-up quizzes will not be offered.**
  - **Problem sets** (30% of your final grade). For the problem sets, you may discuss the problems with one another or with me as much as you want. *But you must always do the final write-up completely on your own.* A good strategy when working together is to use a blackboard and erase it completely before writing up your (separate) answers. We will also discuss the problem sets in class. The due dates for the problem sets are: (note that the due dates may change depending on how fast we go through the material, consult the course website for the official due dates).
    - PS1: Rational Choice Theory, Due Date: **Friday, Feb. 23, 11.59pm.**
    - PS2: Social Choice Theory I, Due Date: **Friday, April 20, 11.59pm.**
    - PS3: Social Choice Theory II, Due Date: **Friday, May 4, 11.59pm.**

- **Final exam** (20% of your final grade). The final will be cumulative and given as an in-class exam given during finals week. A study guide will be provided during the last week of the semester. The exam will be held during exam week (May 12 - 18, 2018). Consult Testudo for the date, time and location of the final exam.

## Course Policies

A full list of course-related policies and relevant links to resources may be found at:

<http://www.ugst.umd.edu/courserelatedpolicies.html>.

## Communication about this Course

I will use email to convey important information, and students are responsible for keeping their email address up to date, and must ensure that forwarding to another address functions properly. Failure to check email, errors in forwarding, and returned email are the responsibility of the student, and do not constitute an excuse for missing announcements or deadlines.

## Class Cancellations

The University may be closed in the event of an emergency, in which case class will be cancelled. To find out if the University is closed you can check its main site (<http://www.umd.edu>), its emergency preparedness site (<http://www.umd.edu/emergencypreparedness/>), or call the “snow phone line” at 301-405-7669 (which covers more than just snow caused closings). If class is cancelled while the University remains open, then there will be an announcement posted on the course ELMS page.

**Emergency protocol:** In the case of an extended closure to the University (e.g., because of inclement weather), consult the ELMS course page for announcements and changes to any due dates.

## Attendance and Absences

Students are expected to attend classes regularly. Consistent attendance offers students the most effective opportunity to gain command of course concepts and materials. Events that justify an excused absence include: religious observances; mandatory military obligation; illness of the student or illness of an immediate family member; participation in university activities at the request of university authorities; and compelling circumstances beyond the student’s control (e.g., death in the family, required court appearance). Absences stemming from work duties other than military obligation (e.g., unexpected changes in shift assignments) and traffic/transit problems do not typically qualify for excused absence. Students claiming an excused absence must notify the course instructor in a timely manner and provide appropriate documentation. The notification should be provided either prior to the absence or as soon afterwards as possible. In the case of religious observances, athletic events, and planned absences known at the beginning of the semester, the student must inform the instructor during the schedule adjustment period. All other

absences must be reported as soon as is practical. The student must provide appropriate documentation of the absence. The documentation must be provided in writing to the instructor by the means specified in this syllabus. The full university attendance/absence policy can be found here: <http://www.ugst.umd.edu/courserelatedpolicies.html>.

## **Academic Integrity**

The UMD Honor Code prohibits students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents and forging signatures. On every examination, paper or other academic exercise not exempted by the instructor, students must write by hand and sign the following pledge:

*I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment).*

Allegations of academic dishonesty will be reported directly to the Student Honor Council: <http://www.shc.umd.edu>

## **Disability Support**

Students with a documented disability should inform the instructors within the add-drop period if academic accommodations will be needed. NB: You are expected to meet with your instructor in person to provide them with a copy of the Accommodations Letter and to obtain your instructor's signature on the Acknowledgement of Student Request form. You and your instructor will plan together how accommodations will be implemented throughout the semester. To obtain the required Accommodation Letter, please contact Disability Support Service (DSS) at 301-314-7682 or [dissup@umd.edu](mailto:dissup@umd.edu)

## **Copyright Notice**

Class lectures and other materials are copyrighted. They are the property of the instructor - do not sell them, do not post them on a website. They may not be reproduced for anything other than personal use without written permission from the instructor. Copyright infringements may be referred to the Office of Student Conduct.

## **Academic Accommodations for Students who Experience Sexual Misconduct**

The University of Maryland is committed to providing support and resources, including academic accommodations, for students who experience sexual or relationship violence as defined by the University's Sexual Misconduct Policy. To report an incident and/or obtain an academic accommodation, contact the Office of Civil Rights and Sexual Misconduct at 301-405-1142. If you wish to speak confidentially, contact Campus Advocates Respond and Educate (CARE) to Stop Violence at 301-741-3555. As 'responsible university employees' faculty are required to report any disclosure of sexual misconduct, i.e., they may not hold such disclosures in confidence. For more information: <http://www.umd.edu/ocrsm/>

## **Diversity**

The University of Maryland values the diversity of its student body. Along with the University, I am committed to providing a classroom atmosphere that encourages the equitable participation of all students regardless of age, disability, ethnicity, gender, national origin, race, religion, or sexual orientation. Potential devaluation of students in the classroom that can occur by reference to demeaning stereotypes of any group and/or overlooking the contributions of a particular group to the topic under discussion is inappropriate.

For information on elms, counseling, health, learning workshops, tutoring, writing help, student rights in undergrad courses, questions about graduation or add/drop/withdraw, please see <http://www.ugst.umd.edu/courserelatedpolicies.html>.