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

Instructor:	Eric Pacuit (pacuit.org)
Semester:	Fall 2019
Email:	epacuit@umd.edu
Course Website:	myelms.umd.edu/courses/1269219
Class Times:	TuTh 2:00pm - 2:50pm
Class Location:	HBK 0109
Office:	Skinner 1103A
Office Hours:	Th 3:15pm - 5:15pm

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.

Philosophy, politics and economics major

This is a required course in the new Philosophy, Politics and Economics major (the major started in Fall 2019). Future versions of this course will be under the number PHPE 400, and students that have taken PHIL 309P will receive credit for PHPE 400. For more information about the PPE major, consult philosophy.umd.edu/ppe or contact Brian Kogelman (bkogelma@umd.edu).

Reading material

The course will be based on readings from various textbooks are 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

Below is a tentative syllabus for this semester. This is subject to change. Please consult the ELMS course website for an up-to-date overview of the material discussed in the course.

Introduction and Course Overview

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

  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

  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

  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

  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-Minder Drivers Problem

  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

  Reading:

  * Christian List, Social Choice Theory (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/) 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

  Reading:

  * EP, Notes on the proof of May's Theorem
  * Christian List, Social Choice Theory (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/), 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)

  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

  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

  Reading:

  * Christian List, Social Choice Theory (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

  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/), Section 5 Judgment aggregation, The Stanford Encyclopedia of Philosophy, Edward N. Zalta (ed.), 2013.

- Sen's Impossibility of Paretian Liberal

  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 Theroem

  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

The course requirements are:

- **Participation** (40% of your final grade). Active participation in the course is very important. Since this is a hybrid course, a portion of your participation grade will be online. There are two parts that make up your participation grade:

  1. Online discussion: The online discussion for the course will take place on piazza.com. You will receive and invitation to sign up to piazza and join the course in piazza. A link to the course site on piazza is available on the course website. You will receive a participation score approximately 5-7 times during the semester. Your grade will be based on how actively you participate in the discussion. Each week, you should be asking at least 3-5 questions and answering at least 2-4 questions.
  2. In-class quizzes: Throughout the semester, I will give short in-class quizzes. These in-class quizzes will generally not be announced and could take place at any time during the lecture. The purpose of these in-class quizzes is to encourage participation and to test basic comprehension of the material. There are no make-ups for missed in-class quizzes. The lowest scores of 10% of the total number of quizzes will be dropped (so if there are 50 in-class quizzes, then the lowest 5 quiz scores will be dropped).

     The in-class quizzes will be delivered using the tools from tophat.com. Please sign up for a subscription at tophat.com, the join code for this course is **781517**.

  Although I will not take attendance, students are *strongly encouraged to attend all lectures.* This is a fast-paced course, so you will quickly fall behind if you miss lectures. Students are responsible for any announcement made during the lectures.

- **Quizzes** (30% of your final grade). A number of online quizzes will be given throughout the semester. The quizzes are available on the ELMS course website. Since we may discuss solutions to the quizzes in class or online, quizzes will not be accepted after the deadline. The lowest quiz score will be dropped.

- **Problem sets** (15% of your final grade). There will be some short problem sets. The problem sets will be assigned on ELMS and your solutions must be submitted on ELMS. You will receive 5 points for completing the problem set on time (this grade is only based on whether you completed the problem set). We will discuss the solutions in class and/or online. To receive full credit for the problem sets, you must submit your (corrected) solutions to the problem sets as a single pdf document by the end of the semester.

- **Final exam** (15% 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 (December 11 - 17, 2019). Consult

  `https://ntst.umd.edu/soc/exam/search?courseId=&sectionId=&termId=201908`

  for the Fall 2019 exam schedule.

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.

All announcements (e.g., changes to the schedule, hints about the problem sets) about the course will be posted on the ELMS announcement page.

`https://myelms.umd.edu/courses/1269219/announcements`

Please make sure that you check this page regularly and/or receive the email notifications from ELMS when the page is updated.

Class cancelations

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.

Academic support

You should make sure you are familiar with the rules regarding proper academic conduct as outlined at `http://www.shc.umd.edu/`.

Accommodations. Students who require special accommodations should inform the instructor at the beginning of the course, and must provide the appropriate documentation from the DSS office (see `http://www.counseling.umd.edu/DSS/`).

Course procedures and policies

Consult the following webpage for the official procedures and policies for this course:

www.ugst.umd.edu/courserelatedpolicies.html