

CHAPMAN UNIVERSITY
Wilkinson College
One University Drive
Orange, CA 92866

Phil 306: Games and Decisions
GE Area: 7QI, Quantitative Inquiry; 7VI, Values Inquiry

Spring 2014

Credits: 3

Catalog Description and Content:

Prerequisite: A philosophy course or an upper division course in economics or mathematics, or consent of instructor. Decision theory and game theory are formal apparatuses for analyzing preferences and choices. Students will learn the basics of the formal theories and then examine their foundations and philosophical implications. (3 Credits)

Instructor Info

Professor K. Violet McKeon

Email: mckeon@chapman.edu

Office Hours: T & Th 12-1 in Jazzman's Cafe

Student Learning Outcomes:

1. To acquaint students with the formal apparatus of decision theory and rudimentary game theory.
2. To acquaint students with philosophical problems and issues arising from these theories.
3. To introduce students to philosophical methods of argument and analysis.
4. Critical Reasoning: To improve the student's ability to construct and analyze complex arguments, and distinguish good reasoning from bad.
5. Ethics/Values GE: To articulate how values and ethics inform human understanding, structures, and behavior.
6. Quantitative GE: To understand, apply, and analyze quantitative methods and techniques in university-level inquiry.

Major Topics Covered:

- I. Decisions Under Ignorance
 - a. Introduction and Setting up Decision Matrices (Peterson Chpts. 1-2)
 - b. Rationality Rules for Decisions under Ignorance (Peterson Chapter 3)
 - c. Rawls vs. Harsanyi on Distributive Justice (Reading on Blackboard)
- II. Decisions Under Risk
 - a. Expected Value (Peterson 4.1)
 - b. Maximizing Expected Value (Peterson 4.2-4.3;)
 - c. Decision Theoretic Paradoxes (Peterson 4.4-4.7)
 - d. Utility and Classical Decision Theory (Peterson Chpt. 5)
 - e. Pascal's Wager
- III. Probability Theory
 - a. The Mathematics of Probability (Peterson Chpt. 6)
 - b. Philosophical Theories of Probability (Peterson Chpt. 7)
 - c. Why Should We Accept the Preference Axioms (Peterson Chpt. 8)
 - d. Newcomb's Paradox and Causal vs. Evidential Decision Theory (Peterson Chapter 9)
- IV. Game Theory

- a. Basic Concepts (Peterson Chpt. 11 and Don Ross, "[Game Theory](#)", Stanford Encyclopaedia of Philosophy)
- b. Nonzero-sum and Cooperative Games (Peterson Chapter 12)
- c. Hardin *Tragedy of the Commons* and Ostrom *Governing the Commons* (Reading on BB)
- d. Evolutionary Game Theory (Peterson Chapter 12.5)
- e. Ethics and Game Theory (Peterson Chapter 12.6)
- f. Auctions (Reading on BB)

Texts and Required Readings:

1. [An Introduction To Decision Theory](#), Martin Peterson (Cambridge University Press, 2009)
2. Additional articles, available online (Rawls, Harsanyi, Hardin, Ostrom, et al.)

Please come to class with paper and a writing utensil!

Instructional Methods/Strategies:

The course will include lecture, discussion, collaborative exercises, information technology, and co-curricular experiences.

Methods of Evaluation:

Homework/ Scribe Notes:	25%
Midterm:	35%
Comprehensive Final Exam:	40%

Students with Disabilities:

In compliance with ADA guidelines, students who have any condition, either permanent or temporary, that might affect their ability to perform in this class are encouraged to contact the Office of Disability Services. If you will need to utilize your approved accommodations in this class, please follow the proper notification procedure for informing your professor(s). This notification process must occur more than a week before any accommodation can be utilized. Please contact [Disability Services](#) at (714) 516-4520 if you have questions regarding this procedure, or for information and to make an appointment to discuss and/or request potential accommodations based on documentation of your disability. Once formal approval of your need for an accommodation has been granted, you are encouraged to talk with your professor(s) about your accommodation options. The granting of any accommodation will not be retroactive and cannot jeopardize the academic standards or integrity of the course.

Chapman University Academic Integrity Policy:

Chapman University is a community of scholars which emphasizes the mutual responsibility of all members to seek knowledge honestly and in good faith. Students are responsible for doing their own work, and academic dishonesty of any kind will not be tolerated anywhere in the university. At their discretion the faculty may submit student work to plagiarism detection software, such as Turnitin for review.

Equity and Diversity

Chapman University is committed to ensuring equality and valuing diversity. Students and professors are reminded to show respect at all times as outlined in Chapman's Harassment and Discrimination Policy:

<http://tinyurl.com/CUHarassment-Discrimination>. Any violations of this policy should be discussed with the professor, the Dean of Students and/or otherwise reported in accordance with this policy.