Phi 234 Rational Choices
Hanover College, Spring 2016
12:00-1:50pm, MTWRF, SCC 108

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Spring 2016 Office Hours: 11-12 MWF, and by appointment
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Course Description
Rational Choices introduces students to the basic principles of decision theory, game theory, and social choice theory, together with applications of these principles to problems in economic behavior, evolutionary biology, social dynamics, voting systems, and others.

Text
Dixit, Skeath, and Reiley, *Games of strategy*, 4th ed. (Norton, 2015). [GoS]

Course Requirements & Grading
There will be nine homework assignments and one unannounced reading quiz (worth 25 pts apiece) throughout the term. _Late assignments or a missed quiz cannot earn a grade._ There will also be two in-class exams (worth 125 pts apiece). The below grading scheme presupposes good attendance and class participation; lack thereof <u>will</u> result in a lowered grade.

Point Distributions

9 homework sets, 25ea:	225
1 unannounced quiz:	25
2 in-class exams, 125ea:	250
Total:	**500**

Letter Grade Distribution

A 466-500	B+ 434-449	C+ 384-399	D+ 334-349	F 0-299
	B 416-433	C 366-383	D 316-333	
A- 450-465	B- 400-415	C- 350-365	D- 300-315	

Classroom policies
(1) Most of our class time will be devoted to working problems together on the board or in discussion. This format presupposes that you have worked through the assigned reading and some practice exercises on your own at least once before coming to class. The more of us who come to class prepared, the more richly rewarding this class will be for all of us and the more you will learn in it. I promise to do my part in this effort, so please do your part as well.
(2) Let me put this very simply. Your cellphone is a distraction. It distracts you, your classmates, and me, from engaging one another in the activity at hand (discussion, problem-solving, etc.). Therefore, before class begins, you are required to put your cellphone on silence and put it away.
(3) You get one unexcused, no-questions-asked absence this term. I hope you don't use it. After that, a penalty will be applied to your final grade.

Objectives of the Abstraction and Formal Reasoning (AFR) LADR:
(1) To understand the nature of symbolic language, formal reasoning, and the process of solving problems by means of abstract modeling.
(2) To identify the essential qualities of these tools, qualities that underlie their effectiveness in the solution of real-world problems.
(3) To explain the limitations of these formal systems of reasoning.

Special Information

- Americans with Disabilities Act: If you have any special needs as addressed by the Americans with Disabilities Act and need course materials or tests in alternative formats, notify me immediately. All reasonable efforts will be made to accommodate your special needs.
- Academic Dishonesty: Academic honesty is essential to the intellectual life of the College. Thus, academic dishonesty, such as cheating and plagiarism, is a basis for disciplinary action. No suspected case of academic dishonesty will be taken lightly; all will be handled in accordance with the student conduct code.
- Dropping this course: The deadline for discretionary withdrawal from any class is 5:00pm, Friday, 13 May.
- Degree Requirements: This course satisfies the Abstraction and Formal Reasoning LADR and is an upper-level elective in the Philosophy major or minor.
- Pass/Fail Option: If you are taking this course P/F, you must have a C- or better going into the final exam AND get a C- or better on the final exam in order to pass.

Reading Schedule

Date	Readings	Topic
May 2	GoS, Chs.1&2	Course introduction
3	--	Decision Theory: Preferences and probabilities
4	--	Decision Theory: Ignorance and risk
5	--	Decision Theory: Some paradoxes
6	GoS, Ch.3	Sequential-move games
9	GoS, Ch.4	Simultaneous-move games with discrete strategies
10	GoS, Ch.6	Games with both sequential and simultaneous moves
11	GoS, Chs.7	Simultaneous-move games with mixed strategies
12	GoS, Ch. 8	Uncertainty and information
13	--	No class
16	--	1st exam
17	GoS, Ch. 9	Strategic moves
18	GoS, Ch. 10	Variations on the prisoners' dilemma
19	GoS, Ch. 11	Collective-action games
20	GoS, Ch. 12	Evolutionary game theory
23	--	Some interesting results of evolutionary game theory
24	GoS, Ch.14	Brinkmanship
25	--	Social Choice Theory: The basics
26	GoS, Ch.15	Voting procedures
27	--	2nd exam

NB: This schedule is subject to change. Readings (including at least some of the practice problems in the readings) are to be completed by the date on the reading schedule.