

Rationality and Decisions

Course: PHIL 370

Instructor: Gerard Rothfus

Classroom: SPA-212

Day/Time: T, Th: 11am-12:15pm

Office Hours: T, Th: 12:15-1:30pm, other times by appointment

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Description

This course introduces students to formal techniques for making and evaluating decisions. In order to develop their skills in representing and analyzing decisions, students will be exposed to concepts and methods from areas such as symbolic logic, probability theory, and game theory. While we will be interested primarily in normative issues (having to do with how one ought to reason), we will also take note of empirical findings regarding how human beings tend to actually make decisions. The course is aimed at equipping students with tools they can use to improve the decisions they make and to avoid common errors of reasoning.

Course Requirements

There are two exams: a midterm and a final. Each exam counts as 30% of your final grade. If you do better on the final exam than the midterm, your midterm grade will be raised to the average of your midterm and final exam grades. Homework problem sets (due roughly every other week) count for 25% of the final grade, and participation covers the final 15%.

Course Materials

Required Textbook: Jeffrey, *The Logic of Decision* (2nd edition). It is imperative that you have access to a copy of this textbook as many of the homework exercises will be drawn from it. (It is also a classic of the field.) This text may also be supplemented with lecture notes and extra readings that will be made available via the course's Beachboard page.

Grade Scale

A: 90-100	B: 80-89	C: 70-79	D: 60-69	F: < 60
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Exams and Homework

Homework will be graded half for completion and half for correctness. Homework assignments will be due at the beginning of (roughly) every other Tuesday class. (See the course outline below for homework due dates.) Late homework will not be accepted; though if you need to miss a class at which homework is due for any reason you may email the homework in before the start of class. The lowest two homework grades will be dropped. There will be two exams: a midterm and a final. The final will be cumulative. If your final exam grade is higher than your midterm grade, your midterm grade will be boosted to the average of your midterm and final exam grades. Both exams will be closed book/notes; the only material you need to bring is a pen or pencil. If you need to miss a test for a serious reason, you will need to provide documentation (e.g. a medical note, jury summons, etc.) in order to take a (different) make-up exam. (See the make-up policy below.)

Attendance and Participation

Students are expected to attend lectures and participate in class discussions and activities. I will frequently make use of online polls to assess student comprehension of course material; participating in these polls will help a student's participation grade, which counts for 15% of the overall grade. Your poll answers will not be graded on correctness. If you will not have access to an electronic device suitable for accessing the internet during class (e.g. a smart phone or laptop), please let me know and we will find an alternative way for you to participate in such polls.

Make-up Policy

If a student must miss a test for a university approved reason, an alternate test will be administered on another date. Please let me know as soon as possible if you will need to reschedule a test for such a reason. (The list of university approved reasons for missing a test is available here: <https://www.csulb.edu/academic-senate/policy-statement-17-17-attendance-policy-supersedes-01-01>)

Academic Integrity

Academic dishonesty will not be tolerated. The CSULB Policy on Cheating and Plagiarism will be followed strictly. Students who have any questions or

uncertainty whatsoever about this policy are responsible for meeting individually with the instructor to discuss the policy. Anyone found violating this policy will receive an F for the course and will be reported to the appropriate University officials.

Disabilities

It is the student's responsibility to notify the instructor in advance of the need for accommodation of a University verified disability. I will gladly provide the required accommodations. (The university policy on accommodations can be found here: www.csulb.edu/academic-senate/policy-statement-08-11-accessibility-and-faculty-responsibility-the-selection-of)

Course Outline

Week of:	Topic:	Reading/HW:
Aug. 26	Deliberation: A Bayesian Framework	LoD, Ch. 1
Sept. 2	Equivalent Scales	LoD, Ch. 2
Sept. 9	Ramsey's Theory	LoD, Ch. 3/ HW 1
Sept. 16	Propositional Attitudes	LoD, Ch. 4
Sept. 23	Preference	LoD, Ch. 5/ HW 2
Sept. 30	Equivalence, Perspectives, Quantization	LoD, Ch. 6
Oct. 7	Review and Midterm Exam	Review
Oct. 14	From Preference to Probability	LoD, Ch. 7/ HW 3
Oct. 21	Uniqueness	LoD, Ch. 8
Oct. 28	Existence: Bolker's Axioms	LoD, Ch. 9/ HW 4
Nov. 4	Boundedness; Causality	LoD, Ch. 10
Nov. 11	Probability Kinematics	LoD, Ch. 11/ HW 5
Nov. 18	Induction and Objectification	LoD, Ch. 12
Nov. 25	Fall Break: No Classes	None
Dec. 2	Review for Final	Review/ HW 6
Dec. 9	Finals Week: Final Exam	Review