



**DEPARTMENT OF ECONOMICS**

**ECON 171: DECISIONS UNDER UNCERTAINTY  
CENTR 119, MONDAYS & WEDNESDAYS, 5:00PM-6:20PM**

**FALL QUARTER 2012  
SYLLABUS**

**Instructor:** Steven B. Levkoff, Ph.D.

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**Course Webpage:** <http://ted.ucsd.edu>

**Office:** Economics Building, Room 111

**Office Hours:** Mondays, 4:10pm-5:00pm, open door, or by appointment

**Teaching Assistants:** Adam Greenberg ([aegreenb@ucsd.edu](mailto:aegreenb@ucsd.edu)), Heea Jung ([hej001@ucsd.edu](mailto:hej001@ucsd.edu)), Jacob Johnson ([j4johnson@ucsd.edu](mailto:j4johnson@ucsd.edu))

**Course Description:** This course provides an analytical framework for making choices when elements of the economic environment are uncertain. Topics include, but are not limited to, probability theory, expected utility, risk aversion, insurance markets, information economics, value of information, decision theory, game theory, behavioral economics, and more.

**Readings:**

Required:

- [1] *Making Decisions*, by D.V. Lindley, 2<sup>nd</sup> Edition. The bookstore has a custom made version for sale that is much cheaper. \*This is the core text for the course.

Optional

- [2] *The Economics of Uncertainty and Information*, by Timothy Van Zandt, INSEAD, 2006. Selected readings from this book will be provided electronically and are intended to supplement [1].
- [3] *Information Economic*, by Urs Birchler and Monika Butler, Routledge 2007. Good book on information economics. Very closely related to the material in this course.
- [4] *The Economics of Uncertainty and Information*, by Jean Jaques Laffont, MIT Press, 1989. This is for the advanced, curious reader only. Mathematically rigorous.

- [5] *Fooled By Randomness*, Nassim N. Taleb. Excellent book that everyone should read about how human nature tends to cloud peoples' assessments of uncertainty.
- [6] *The Black Swan*, by Nassim N. Taleb. A follow up to the discussion in [5]. Also an excellent read and should be read by everyone.
- [7] *Predictably Irrational*, by Dan Ariley. Very interesting and light read about how peoples' behaviors tend to violate many axioms of expected utility and choice under uncertainty. Written by a behavioral economist.

**Prerequisites:** In order to be enrolled in this course, you should have taken the following: Econ 100A or 170A (intermediate microeconomics); AND Econ 120A or ECE 109 or Math 180A or Math 183 or Math 186 (some course in probability & statistics). Some foundations will be presented and reviewed towards the beginning of the course.

**Homework:** While not a formal part of the course grade, problem sets will play a crucial role in developing your problem solving skills and should be taken very seriously. In the past, it has been the case that the students that put the most effort into the problem sets tend to do the best on the exams. Problem sets will be assigned regularly via TED. You are encouraged to work together to solve problem sets, but the solutions you submit should be solely your own. **IT IS YOUR RESPONSIBILITY TO MAKE SURE YOU ARE ENROLLED IN THE ONLINE COURSE AND ROUTINELY CHECK THE COURSE WEBPAGE AND YOUR EMAIL FOR ANNOUNCEMENTS AND TO ACCESS DISTRIBUTED MATERIALS.**

**Examinations:** There will be two midterms (administered at approximately weeks 4 and 8) and a final examination. The registrar has scheduled the final exam for Thursday, 12/13/12, from 7:00pm-10:00pm. All exams are cumulative.

**Grading:**

Midterm Exam	25%
Midterm Exam	35%
<u>Final Exam</u>	<u>40%</u>
Total	100%

**Absences & Attendance:** Any exam or quiz missed for a legitimate reason may be made up at the discretion of the instructor (this may include an oral evaluation as an alternative to taking a written exam). You will receive a zero on any exam or quiz missed without a legitimate reason. If the instructor feels that attendance is slipping, he reserves the right to take attendance and give pop quizzes to be used in the determination of the course grade.

**Classroom Decorum & Email:** To avoid distracting others in the classroom, please arrive on time and do not leave early unless given prior permission. When class is in session, please respect others in the room and refrain from sending or receiving phone calls, pages, or text messages. Please be sure audible signals are turned off before class begins. Please restrict the use of email to the minimally necessary volume and put your full name at the end of email messages and the course name and number in the subject heading.

**Statement of Academic Integrity:** Academic Integrity relates to being honest in the completion of your academic coursework. Trust is the central principle underlying academic integrity. [The University] needs to trust that ideas are your own. This means that all your work should come solely from your effort. For example, you need to complete your tests without external assistance. In addition, you may not present another student's work as your own. Moreover, you should not plagiarize, which is non-credited use of someone else's words or ideas. Overall, then, academic integrity means that [The University's] students will display honest scholarship.

**Tentative Schedule of Topics (Subject to Change):**

Week 1: Introduction to Choice Under Uncertainty

Readings: [1] Chapter 1; [2] Chapter 1

Week 2: Review of Some Probability Theory

Readings: [1] Chapter 2; [2] Chapters 2-3

Week 3: Conditional Probability, Signal Precision, and Forecast Accuracy

Readings: [1] Chapter 3; [2] Chapter 4; [3] Chapter 3

**MIDTERM EXAM #1**

Week 4: Expected Utility Theory

Readings: [1] Chapter 4; [2] Chapters 3, 5; [3] Chapter 4; [4] Chapter 1

Week 5: Intro to Information Economics, Information as a Good

Readings: [1] Chapter 6; [2] Chapter 4; [3] Chapter 3; [4] Chapter 4

Week 6: Risk Aversion, Insurance, Contracts, and Asymmetric Information

Readings: [1] Chapter 5; [2] Chapters 5-7, 9, 11-13; [3] Chapters 12-16; [4] Chapters 2-3, 8-11

**MIDTERM EXAM #2**

Week 7: Valuing Information, Optimal Production of Information, Monopolistic Screening

Readings: [1] Chapter 7; [2] Chapter 10; [3] Chapter 4-6; [4] Chapter 5

Week 8: Decision Analysis

Readings: [1] Chapter 8; [2] Chapter 6; [3] Chapter 4

Week 9: Strategic Interaction, Game Theory, Rational Behavior

Readings: [1] Chapter 10; [2] Chapters 9, 11, 12, 13; [3] Chapters 7-11

Week 10: Additional Topics TBD

Readings: TBD

FINAL EXAM