

Organization: Economics 206 meets from 11:00-12:20 on Mondays and Wednesdays, January 8 through March 14 (university holidays January 15 and February 19 excepted), in Economics 210. My office hours throughout the quarter will be Wednesdays from 2:00-3:00 or by appointment. The course website is <http://weber.ucsd.edu/~vcrawfor/econ206.html>. The first half (approximately) will cover standard topics in the traditional theory of decisions. The second half will cover topics in behavioral decision theory. Instead of a final exam there will be two take-home mini-exams, one for each half. You must work on these individually, without consulting anyone but me. The first mini-exam will be posted on the website by 4 p.m. Wednesday, February 7, and due by email or in the course mailbox in Economics Student Services by 4 p.m. Friday, February 9. The second mini-exam will be posted by 4 p.m. Wednesday, March 14, and due by email or in the course mailbox by 4 p.m. Friday, March 16 (the last day of classes). The 48-hour time limits are a humanitarian gesture, and should not be binding. The dates are firm except for extreme unforeseeable events, in which case exceptions must be requested as soon as possible. I will also post optional problem sets, which should be good practice for the exams, before each segment. The second exam will include a flexible essay question on behavioral decision theory, which will be posted by the second half. This question is meant to help you think about how to use behavioral decision theory to do economics; its choices give you some freedom to make it about the kind of economics you are interested in.

I have ordered copies of the following books for the bookstore. Neither is required, strictly speaking; but both will be useful to people seriously interested in the topic of this course.

David M. Kreps, *Notes on the Theory of Choice*, Boulder, CO: Westview Press, 1987. "Kreps"
Colin Camerer, George Loewenstein, and Matthew Rabin, editors, *Advances in Behavioral Economics*, Princeton, NJ: Princeton University Press, 2003. "Advances"

Outline and Readings (we will cover topics in the order listed, but at an uncertain rate; the most important readings are marked *; those few for which online access may be difficult are either posted on the course website or available via email request (+)); the others are easily accessible on JSTOR, Google Scholar, EconLit, ScienceDirect, etc. (Please try before asking me.) Some of my lecture notes are also posted on the course website.

1. Ordinal Utility: Representation Theorems

*Kreps, Chapters 1–3

*Andreu Mas-Colell, Michael D. Whinston, and Jerry R. Green, *Microeconomic Theory*, New York: Oxford University Press, 1995, Chapter 1, Chapter 3A–E

2. Basic Models of Decision Making Under Objective Uncertainty

*+J. Marschak, "Scaling of Utilities and Probability," in Martin Shubik, editor, *Game Theory and Related Approaches to Social Behavior*, New York: John Wiley and Sons, 1964

*Kreps, Chapter 5

*+Mark Machina, "Expected Utility Hypothesis," in John Eatwell, Murray Milgate, and Peter Newman, editors, *The New Palgrave: A Dictionary of Economics*, London: Macmillan Press and New York: Stockton Press, 1987, vol. 2, pp. 232-239

3. Analytics of Risk and Risk Aversion

*+Mark Machina and Michael Rothschild, "Risk," in *The New Palgrave*, vol. 4, pp. 201-206

*Kreps, Chapter 6

+M. Yaari, "Some Remarks on Measures of Risk Aversion and Their Uses," *Journal of Economic Theory* 1 (1969), pp. 315-329

John Pratt, "Risk Aversion in the Small and in the Large," *Econometrica* 32 (1964), 122-136.

Josef Hadar and William Russell, "Rules for Ordering Uncertain Prospects," *American Economic Review* 59 (1969), pp. 25-34

+Michael Rothschild and Joseph Stiglitz, "Increasing Risk: I. a Definition," *Journal of Economic Theory* 2 (1970), pp. 225-243; see also their "Addendum" in *JET* 5 (1972), p. 306

+Michael Rothschild and Joseph Stiglitz, "Increasing Risk: II. Its Economic Consequences," *Journal of Economic Theory* 3 (1971), pp. 66-84

+Peter Diamond and Joseph Stiglitz, "Increases in Risk and Risk Aversion," *Journal of Economic Theory* 8 (1974), pp. 337-360

4. Expected Utility and Probabilistic Sophistication under Subjective Uncertainty

*Kreps, Chapters 7-9

Francis Anscombe and Robert Aumann, "A definition of Subjective Probability," *Annals of Mathematical Statistics* 34 (1963), pp. 199-205

Leonard Savage, *The Foundations of Statistics*, New York: Dover, 1972, Chapters 1-5

Mark Machina, "'Expected Utility/Subjective Probability' Analysis without the Sure-Thing Principle or Probabilistic Sophistication," *Economic Theory* 26 (2005), pp. 1-62

5. Applications of the Classical Model

*+John McMillan and Michael Rothschild, "Search," Chapter 27 in Robert Aumann and Sergiu Hart, editors, *Handbook of Game Theory with Economic Applications*, Elsevier, 1994, vol. 2, pp. 905-927

Peter Diamond, "Search Theory," in *The New Palgrave*, vol. 4, pp. 273-279

Michael Rothschild, "Searching for the Lowest Price when the Distribution of Prices is Unknown," *Journal of Political Economy* 82 (1974), pp. 689-711

Kenneth Arrow and Anthony Fisher, "Environmental Preservation, Uncertainty, and Irreversibility," *Quarterly Journal of Economics* 88 (1974), pp. 312-319

6. Evaluating the Underlying Assumptions of the Classical Model: Evidence and Alternatives

*Colin Camerer and George Loewenstein, "Behavioral Economics: Past, Present, Future," Chapter 1 in "Advances"; manuscript at <http://www.hss.caltech.edu/~camerer/ribe239.pdf>

*Matthew Rabin, "A Perspective on Psychology and Economics," *European Economic Review* 46 (2002), pp. 657-685

Matthew Rabin, "Psychology and Economics," *Journal of Economic Literature* 36 (1998), pp. 11-46

*Daniel Kahneman, "Maps of Bounded Rationality: Psychology for Behavioral Economics," *American Economic Review* 93 (2003), pp. 1449-1475

Daniel Kahneman, "A Psychological Perspective on Economics," *American Economic Review Papers and Proceedings* 93 (2003), pp. 162-168

John Conlisk, "Why Bounded Rationality?," *Journal of Economic Literature* 34 (1996), pp. 669-700

A. Choice under Uncertainty (or Certainty)

- *Colin Camerer, pages 617-673 of "Individual Decision Making," Chapter 8 in John Kagel and Alvin Roth, editors, *The Handbook of Experimental Economics*, Princeton, NJ: Princeton University Press, 1995, pp. 587-703
- *Matthew Rabin and Richard Thaler, "Anomalies: Risk Aversion," *Journal of Economic Perspectives* 15 (2001), pp. 219-232
- Matthew Rabin, "Risk Aversion and Expected-Utility Theory: A Calibration Theorem," *Econometrica* 68 (2000), pp. 1281-1292
- Paul Samuelson, "Comments on the Favorable-Bet Theorem," *Economic Inquiry* 12 (1974), pp. 345-55; reprinted in his *Collected Scientific Papers*, vol. IV, pp. 550-560
- Paul Samuelson, "Risk and Uncertainty: A Fallacy of Large Numbers," *Scientia* 98 (1963), pp. 108-113; reprinted in his *Collected Scientific Papers*, vol. I, pp. 153-158
- Chris Starmer, "Developments in Non-Expected Utility Theory: The Hunt for a Descriptive Theory of Choice under Risk," *Journal of Economic Literature* 38 (2000), pp. 332-382; Chapter 4 in "Advances"; <http://www.hss.caltech.edu/~camerer/NYU/02-Starmer+.pdf>
- Mark Machina, "Choice Under Uncertainty: Problems Solved and Unsolved," *Journal of Economic Perspectives* 1 (1987), pp. 121-154
- Mark Machina, "'Expected Utility' Analysis without the Independence Axiom," *Econometrica* 50 (1982), pp. 277-323
- David Harless and Colin Camerer, "The Predictive Utility of Generalized Expected Utility Theories," *Econometrica* 62 (1994), pp. 1251-1289
- *+Colin Camerer, "Three Cheers—Psychological, Theoretical, Empirical—for Loss Aversion," *Journal of Marketing Research* 62 (2005), pp. 129-133
- Daniel Kahneman, Jack Knetsch, and Richard Thaler, "Experimental Tests of the Endowment Effect and the Coase Theorem," *Journal of Political Economy* 98 (1990), pp. 1325-1348; Chapter 2 in "Advances"
- Daniel Kahneman, Jack Knetsch, and Richard Thaler, "Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias," *Journal of Economic Perspectives* 5 (1991), pp. 193-206.
- Daniel Kahneman and Amos Tversky, "Prospect Theory: An Analysis of Decision under Risk," *Econometrica* 47 (1979), pp. 263-292
- Charles Plott and Kathryn Zeiler, "The Willingness to Pay-Willingness to Accept Gap, the 'Endowment Effect,' Subject Misconceptions, and Experimental Procedures for Eliciting Valuations," *American Economic Review* 95 (2005), pp. 530-45
- Graham Loomes and Robert Sugden, "Regret Theory: An Alternative Theory of Rational Choice Under Uncertainty," *Economic Journal* 92 (1982), pp. 805-824
- Botond Köszegi and Matthew Rabin, "A Model of Reference-Dependent Preferences," *Quarterly Journal of Economics* 121 (2006), pp. ???-???
- +Botond Köszegi and Matthew Rabin, "Reference-Dependent Risk Attitudes," manuscript, October 2006
- *Jeremy Siegel and Richard Thaler, "Anomalies: The Equity Premium Puzzle," *Journal of Economic Perspectives* 11 (1997), pp. 193-205
- Shlomo Benartzi and Richard Thaler, "Myopic Loss Aversion and the Equity Premium Puzzle," *Quarterly Journal of Economics* 110 (1995), pp. 73-92; Chapter 22 in "Advances"

Nicholas Barberis and Richard Thaler, "A Survey of Behavioral Finance," Chapter 18 in G.M. Constantinides, M. Harris and R.M. Stulz, editors, *Handbook of the Economics of Finance*, Elsevier, 2003, vol. 1, part 2, pp. 1051-1121;

<http://www.hss.caltech.edu/~camerer/NYU/09-BarberisThaler.pdf>

*Colin Camerer, Linda Babcock, George Loewenstein, and Richard Thaler, "Labor Supply of New York City Cabdrivers: One Day at a Time," *Quarterly Journal of Economics* 112 (1997), pp. 407-441; Chapter 19 in "Advances"

B. Heuristics and Biases in Probabilistic Judgment

*Colin Camerer, pages 590-616 of "Individual Decision Making," Chapter 8 in John Kagel and Alvin Roth, editors, *The Handbook of Experimental Economics*, Princeton, NJ: Princeton University Press, 1995, pp. 587-703

*+Amos Tversky and Daniel Kahneman, "Judgment under Uncertainty: Heuristics and Biases," *Science* 185 (1974), pp. 1124 - 1131

Mahmoud El-Gamal and David Grether, "Are People Bayesian? Uncovering Behavioral Strategies," *Journal of the American Statistical Association*, 90 (1995), pp. 1137-1145.

Matthew Rabin, "Inference by Believers in the Law of Small Numbers," *Quarterly Journal of Economics* 117 (2002), pp. 775 – 816

Matthew Rabin and Dimitri Vayanos, "The Gambler's and Hot-Hand Fallacies in a Dynamic-Inference Model," manuscript, 2005; <http://elsa.berkeley.edu/~rabin/HotHand8.pdf>

Linda Babcock and George Loewenstein, "Explaining Bargaining Impasse: The Role of Self-Serving Biases," *Journal of Economic Perspectives* 11 (1997), pp. 109-126; Chapter 11 in "Advances"

Luis Santos-Pinto and Joel Sobel, "A Model of Positive Self-Image in Subjective Assessments," *American Economic Review* 95 (2005), pp. 1386-1402.

C. Present-biased preferences

*George Loewenstein and Richard Thaler, "Anomalies: Intertemporal Choice," *Journal of Economic Perspectives* 3 (1989), pp. 181-193

*Shane Frederick, George Loewenstein, and Ted O'Donoghue, "Time Discounting and Time Preference: A Critical Review," *Journal of Economic Literature* 40 (2002), pp. 351-401; Chapter 6 in "Advances"; <http://www.hss.caltech.edu/~camerer/NYU/03-LowensteinODonoghueFrederick+.pdf>

*George-Marios Angeletos, David Laibson, Andrea Repetto, Jeremy Tobacman, and Stephen Weinberg, "The Hyperbolic Consumption Model: Calibration, Simulation, and Empirical Evaluation," *Journal of Economic Perspectives* 15 (2002), pp. 47-68; <http://www.hss.caltech.edu/~camerer/NYU/03-Angeletos.pdf>

David Laibson, "Golden Eggs and Hyperbolic Discounting," *Quarterly Journal of Economics* 112 (1997), pp. 443-478; Chapter 15 in "Advances"

Ariel Rubinstein, "Economics and Psychology? The Case of Hyperbolic Discounting," *International Economic Review* 44 (2003), pp. 1207-1216

Ted O'Donoghue and Matthew Rabin, "Doing it now or later," *American Economic Review* 89 (1999), pp. 103–124; Chapter 7 in "Advances"

Ted O'Donoghue and Matthew Rabin, "Choice and Procrastination," *Quarterly Journal of Economics* 116 (2001), pp. 121-160

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