Stochastic Choice (Ec 2057)

Fall 2021

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TF: Brit Sharoni brit_sharoni@fas.harvard.edu **Section Time:** TBD   **Location:** TBD

Description: This course focuses on theory of random choices, such as the random utility models used in discrete choice econometrics and IO, as well as models of random perception and cognition used in psychology and behavioral economics.

The underlying perspective is of decision theory. We will seek to pin down the behavioral content of various models (axiomatic characterization), examine their uniqueness properties (identification), and try to understand the meaning of various parameters (comparative statics).

This course is based on a new text I just wrote. Reading is required before each lecture. Our meetings will consist mostly of discussion of the text. I will present additional material, indicate open problems in the literature, and offer more perspective. But our meetings will not be "lectures" and active participation and discussion is required. Sections will discuss problems and offer an opportunity for more discussion.

This course is less math-heavy than my other course (2059) and should be accessible not only to theorists, but more broadly to students who are interested in methodology in metrics, IO, or behavioral and experimental.

Tentative Course Outline:

Deterministic vs Stochastic Choice .... ≈ .5 meeting
Random Utility .... ≈ .5 meeting
Axioms for RU, Identification .... ≈ .5 meeting
Luce, Logit, and i.i.d. models .... ≈ .5 meeting
Patterns of Substitution .... ≈ .5 meeting
Random Attention .... ≈ .5 meeting
Random Expected Utility .... ≈ 1 meeting
Non-Expected Utility .... ≈ 1 meeting
Learning .... ≈ 1 meeting
Rational Inattention .... ≈ 1 meeting
Dynamic Choice .... ≈ 1 meeting
Dynamic Optimality .... ≈ 1 meeting
Response Times .... ≈ 2 meetings
Other Topics .... ≈ 1.5 meetings

Grading: 30% participation + 70% problem sets.

You may work together on the problems in groups no larger than 3. Students should acknowledge their collaborators and describe the extent of their collaboration at the top of the relevant assignments. While collaboration is allowed, directly copying someone else's work is not. Problem sets may be discussed, but they should be written up independently. You should not discuss the problems with anyone outside of your group, except for me and the TF.

You are free to look at books, lecture notes, journal articles, and working papers for help and hints but you should follow standard academic norms and acknowledge your sources. Copying answers verbatim from past solutions or from any other source is not allowed. You should type up your answers in LaTex, LyX, or SciWord.