Course Outline:

Econ 648: Introduction to Game Theory

Instructor: E. Katz

Game theory concerns an analysis of decision makers who are aware that their actions and assumptions made by others about their actions will affect the actions of those others. In the last 25 years, game theory has become the core of economic theory, both micro and macro. This course will provide graduate students with an introduction to the tools of game theory, and show the usefulness of this approach by analyzing several examples.

The course will be problem driven, in that theory will be taught by solving specific problems.

The mathematics required for this course does not go beyond calculus. Nonetheless an ability to think mathematically and logically will be a great asset.

The text for this course will be:


The topics covered will include:

2. Information: Information sets, the Harsanyi transformation.
3. Dynamic games with symmetric information: Subgame perfection and its applications, Evolutionary games.
5. Asymmetric information: Perfect Bayesian equilibria, Common knowledge.
8. Signaling: First versus second mover advantages, Signaling in education.

All these topics will be illustrated with a variety of applications. Additional readings may be required.