Econ 213B: Economic/Engineering Design

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Outline

Basics
- Games
- Rationality, knowledge, information
  o Common knowledge
    - Of the environment
    - Of rationality
  o Complete information/incomplete information
- Equilibrium
  o Counterfactuals
    - What happens?
    - What does not happen?
  o Equilibrium in beliefs
  o Nash Equilibrium
  o Conjectural Equilibrium
  o Bayesian Nash Equilibrium

Aggregative Games & Mean Field Games

Design, Part 1: Static
- Hidden information: adverse selection
  o Revelation Principle
  o VCG
- Hidden actions: moral hazard
  o Contracts
- Monetary payments?

Repeated Games
- Basics
  o History
  o Direct Reciprocity
  o Indirect Reciprocity
- Perfect and imperfect monitoring
  o Public histories and private histories
- APS

Design: Part 2: Dynamic
- Designing repeated protocols
- Tokens
- Ratings

Requirements
- Homework(s)
- Presentations
  o Written
  o Oral

(No formal exam)