

Econ 281: Introduction to Game Theory
Professor Shelton
Schedule of Lectures, Assignments, and Exams

Week 1

Reading: DS 1, 2, 3

Lecture 1: Tuesday September 5th

Course business

Definition of game theory, examples, participatory game

Anatomy of a game: players, game structure, payoffs

Classifying games

Extensive form: nodes, branches, path of play, nature

Lecture 2: Thursday September 7th

Backward induction on dynamic games of complete information

Common knowledge, rationality, cardinal vs. ordinal utility, strategies, complete and perfect information

Week 2

Reading: DS 4 and appendix, 6

Lecture 3: Tuesday September 12th

Simultaneous games

The normal form: zero-sum, non-zero-sum, three players

Simultaneity in the extensive form: information sets.

Iterated elimination of strictly dominated strategies

Problem Set One due

Lecture 4: Thursday September 14th

Equilibrium as a stability concept

Nash Equilibrium

Finding Nash equilibria by finding mutual best responses.

Week 3

Reading: S 2, 3

Add/Drop Deadline: Monday, September 18th

Lecture 5: Tuesday September 19th

Equilibria: interlocking strategy and beliefs

Games of pure coordination and focal points

Lecture 6: Thursday September 21st

Discussion of Schelling, Focal Points, Common conjecture

Paper 1 due

Week 4

Reading: DS 5

Lecture 7: Tuesday September 26th

Continuous Variables: best response functions, applications

Problem Set Two due

Lecture 8: Thursday September 28th

Mixed Strategies: situations, examples, and interpretation

Subjective uncertainty

Week 5

Reading: DS 7 and appendices 1 and 2, 8

Lecture 9: Tuesday October 3rd

Mixed Strategies *bis*: best response functions based on beliefs

Lecture 10: Thursday October 5th

Mixed Strategies *fin*: mixing among three or more strategies

Problem Set Three due

Week 6

Reading: DS 9 and appendices 1 and 2

Midterm 1: Tuesday October 10th

Material from lectures 1-10

Lecture 11: Thursday October 12th

Asymmetric Information: basic ideas and modeling techniques

Withdraw Deadline: Friday, October 13th

Week 7

Reading: S 5,7,8

No Lecture: Tuesday October 17th (Fall Break)

Lecture 13: Thursday October 19th

Asymmetric Information: perfect Bayesian equilibria

Bayes' Rule

Week 8

Reading: DS 10

Lecture 14: Tuesday October 24th

Discussion: Deterrence and compellence.

Paper 2 due

No lecture: Thursday October 26th

Assignment: Online feedback form

Problem Set Four due

Week 9

Reading: DS 11 and appendix

Lecture 15: Tuesday October 31st

Asymmetric Information: Pooling, Separating, Semi-separating equilibria

Lecture 16: Thursday November 2nd

Repeated Games: defining a strategy for a repeated game and calculating best responses

Week 10

Reading: DS 12

Lecture 17: Tuesday November 7th

Repeated Games *bis*: games of unknown length

Lecture 18: Thursday November 9th

Repeated Games *fin*: social matching games

Week 11

Reading: handout

Lecture 19: Tuesday November 14th

Collective action games

The assumption of “very small”, positive feedback, norms

Problem Set Five due

Midterm 2: Thursday November 16th

Material from lectures 11-19

Week 12

Reading: DS 13

Lecture 20: Tuesday November 21th

Evolutionary game theory

Basic structure

Discuss slight paradigm shift from non-cooperative game theory

No lecture: Thursday November 23rd (Thanksgiving Holiday)

Week 13

Reading: handout

Lecture 21: Tuesday November 28th

Social Norms

Culture as choices of different equilibria (Guiso-Sapienza-Zingales *JEP* 2006)

Ethics as a coordinating convention to achieve Pareto-superior equilibria (Binmore)

Lecture 22: Thursday November 30th

Experimental Results:

Cooperation in prisoner's dilemma and public goods games

Altruism in dictator and negative reciprocity in ultimatum games

Trust game

Anthropological differences

Week 14

Reading: DS 16, 17 (

Lecture 23: Tuesday December 5th

Bargaining

Rubinstein alternating-offers model

Inside and outside options and OOP

Lecture 24: Thursday December 7th

Auctions

Typology

Winner's Curse

Truthful revelation

Problem Set Six due: Friday December 8th

Reading Period: December 12-17

Final Exam: Monday December 18

Cumulative