

ISE 358 – Game Theory

Instructor: Eugene Perevalov
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Meeting times: MW 1:35-2:50

Course description:

Mathematical analysis of how people interact in strategic situations. Applications include strategic pricing, negotiations, voting, contracts and economic incentives, and environmental issues.

In this course, there will be an emphasis on the fundamentals with a fair (not excessive) degree of mathematical rigor. The goal of this course is to develop main game theory tools to the extent sufficient to read and understand most current research papers.

Prerequisites: a calculus and probability course

Required text:

M.J. Osborne, *An Introduction to Game Theory*, Oxford University Press, 2004.

Reference texts:

D. Fudenberg and J. Tirole, *Game Theory*, MIT Press, 1991.

M.J. Osborne and A. Rubinstein, *A Course in Game Theory*, MIT Press, 1994

Course topics:

Note: This schedule serves as a rough guide for the pacing of materials covered in the course, and will be subject to change as necessary.

Weeks 1-2: Introduction, examples

Week 3-4: Static games of complete information

Week 5-7: Dynamic games of complete information

Week 8-10: Static games of incomplete information

Weeks 11-14: Dynamic games of incomplete information

Grading Policy:

Homeworks: 25%

Midterm: 30%

Final: 45%

Contact Information:

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