Instructor: Paolo Siconolfi, Email: ps17@columbia.edu. Office hours: Wed. 2:00 – 4:00 pm or by appointment.
TA: Poorya Kabir, E-mail: PKabir19@gsb.columbia.edu.

This part of the sequence is entirely devoted to the study of non-cooperative game theory.

Books: The textbook is


Other useful books are:


Problem Sets

There will be weekly problem sets to be submitted to the TA. Problem sets will be given every Thursday and must be given to the TA the next Thursday. You can form groups of up to three students and submit one copy per group.

Final exam

There is a final exam.

Review Sessions

Every Friday, starting from the 8th of February.
Topics

Topic 1: Extensive and normal form games
- Examples of games (MWG Ch. 7C)
- Extensive form representation (MWG Ch. 7C)
- Normal form representation, (MWG Ch. 7.D).
- Random choices (MWG Ch. 7E)

Topic 2: Simultaneous-Move Games
- Dominant strategies (MWG Ch. 8.B)
- Rationalizability (MWG Ch. 8.C)
- Nash Equilibrium (MWG Ch. 8.D)
- Refinements Trembling-Hand Perfection (MWG Ch. 8.F)
- Applications to Industrial Organization: Bertrand Price Competition, Cournot Quantity Competition. (MWG Ch. 12,B)
- Incomplete information : Bayesian Nash Equilibrium (MWG Ch. 8.E)

Topic 3: Dynamic Games and extensive form refinements
- Sequential rationality and Subgame perfection (MWG Ch. 9.A, B)
- Beliefs and Sequential rationality (MWG Ch. 9.C)
- Forward induction

Topic 4: Repeated games
- Repeated games (MWG Ch. 12.D and appendix A)
- Folk theorem (MWG Ch. 12.D and appendix A)
- Applications: bargaining, oligopolistic cartels (MWG Ch. 9.appendix A).