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Economics 8713: Microeconomic Theory 2A
Spring 2024

This is the third course in the graduate microeconomics core sequence. It covers standard topics in game theory, imperfect competition, and related applications.

Main textbook

[MWG] Andreu Mas-Colell, Michael Whinston, and Jerry Green, *Microeconomic Theory*, New York: Oxford University Press, 1995.

Other useful texts:

[FT] Drew Fudenberg and Jean Tirole, *Game Theory*, MIT Press, 1991.
David Kreps, *A Course in Microeconomic Theory*, Princeton University Press, 1990.

Grading

Your course grade will be computed as follows: 10% Homework, 30% Midterm Exam, and 60% Final Exam. There will be 4-5 homework assignments. You can discuss the homework questions with your classmates, but you will need to write up the answers independently.

Course GTA

Zexin Ye
Office Hours: 10-11AM on Thursdays and Fridays and by appointment   Office: Arps Hall 387
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Your GTA will be responsible for grading your problem sets and leading recitation sessions on Fridays.

Readings

    I.   **Strategic Environments**

           MWG: 7.A-E
           FT: 3.1-3.4.3

    II.   **Strategic Choice in Static Games of Complete Information**

MWG: 8.A-D,F
FT: 1,2,8.4
Schelling, T., The Strategy of Conflict, Harvard University Press, 1980.
Bernheim, D., "Rationalizable Strategic Behavior," Econometrica 52, 1984, 1007-28.

Applications:

MWG: 12. C

III. **Strategic Choice in Static Games of Incomplete Information**

MGW: 8.E
FT: 6
Harsanyi, J., "Games with Incomplete Information Played by Bayesian Players, I,II, and III," Management Science 14, 1967-68, 159-82, 320-34, 486-503.

Applications:

FT: 7

Mussa, M. and S. Rosen, "Monopoly and Product Quality," Journal of Economic Theory 18, 1978, 301-17.
Maskin, E. and J. Riley, "Monopoly with Incomplete Information," RAND Journal of Economics 15, 1984, 171-196.
McAfee, P. and J. McMillan, "Auctions and Bidding," Journal of Economic Literature 25, 1987, 699-738.

IV. **Strategic Choice in Dynamic Games of Complete Information**

MWG: 9.A, B
FT: 3.5-3.6, 4, 5
Kreps, Chapter 14.
Selten, R., "Re-examination of the Perfectness Concept for Equilibrium Points in Extensive Games," International Journal of Game Theory 4, 1975, 25-55.
Benoit, J.-P. and V. Krishna, "Finitely Repeated Games," Econometrica 53, 1985, 905-922.
Abreu, D., "On the Theory of Infinitely Repeated Games with Discounting," Econometrica 56, 1988, 383-96.

Applications:

MGW: 12. D-G

1. Dynamic models of imperfect competition

Kreps, D. and J. Scheinkman, "Quantity Precommitment and Bertrand Competition Yield Cournot Outcomes," Bell Journal of Economics 14, 1983, 326-37.
Green, E. and R. Porter, "Non-cooperative Collusion under Imperfect Price Information," Econometrica 52, 1984, 87-100.

2. Imperfect competition with entry

D'Aspremont, C., J. Gabszewicz, and J.-F. Thisse, "On Hotelling's Stability in Competition," Econometrica 17, 1979, 1145-1151.
Sutton, J and A. Shaked, "Product Differentiation and Industrial Structure," Journal of Industrial Economics 36, 1987, 131-147.
Dixit, A. and J. Stiglitz, "Monopolistic Competition and Optimal Product Diversity," American Economic Review 67, 1977, 297-308.
Spence, A.M., "Product Selection, Fixed Costs, and Monopolistic Competition," Review of Economic Studies, 1976.
Salop, S., "Monopolistic Competition with Outside Goods," Bell Journal of Economics 20, 1979, 141-156.

3. Dynamic bargaining

Rubinstein, A., "Perfect Equilibrium in a Bargaining Model," Econometrica 50, 1982, 97-110.

V.   **Strategic Choice in Dynamic Games of Incomplete Information**

MWG: 9.C, D
FT: 8,9,11
Kreps, D. and R. Wilson, "Sequential Equilibrium," Econometrica 50, 1982, 863-94.
Kohlberg, E. and J.-F. Mertens, "On the Strategic Stability of Equilibria," Econometrica 54, 1986, 1003-38.
Kreps, D., P. Milgrom, J. Roberts, and R. Wilson, "Rational Cooperation in the Finitely Repeated Prisoners' Dilemma," Journal of Economic Theory 27, 1982, 245-52.

Applications:

1. Signaling problems

   Cho, I-K and D. Kreps, "Signaling Games and Stable Equilibria," Quarterly Journal of Economics 102, 1987, 179-221.

Banks, J. and J. Sobel, "Equilibrium Selection in Signaling Games," Econometrica 55 (3), 1987, 647-661.

Milgrom, P. and J. Roberts, "Prices and Advertising Signals of Product Quality," Journal of Political Economy 94, 1986, 796-821.

2. Entry deterrence

Milgrom, P. and J. Roberts, "Limit Pricing and Entry under Incomplete Information," Econometrica 50, 1982, 443-460.

Milgrom, P. and J. Roberts, "Predation, Reputation, and Entry Deterrence," Journal of Economic Theory 27, 1982, 288-312.

Academic misconduct:

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct http://studentlife.osu.edu/csc/.

Religious accommodations:

It is Ohio State's policy to reasonably accommodate the sincerely held religious beliefs and practices of all students. The policy permits a student to be absent for up to three days each academic semester for reasons of faith or religious or spiritual belief.

Students planning to use religious beliefs or practices accommodations for course requirements must inform the instructor in writing no later than 14 days after the course begins. The instructor is then responsible for scheduling an alternative time and date for the course requirement, which may be before or after the original time and date of the course requirement. These alternative accommodations will remain confidential. It is the student's responsibility to ensure that all course assignments are completed.

Mental health:

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and

other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

Disability services:

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are isolating while waiting for a COVID-19 test result, please let me know immediately. Those testing positive for COVID-19 should refer to the Safe and Healthy Buckeyes site for resources. Beyond five days of the required COVID-19 isolation period, I may rely on Student Life Disability Services to establish further reasonable accommodations. You can connect with them at slds@osu.edu; 614-292-3307; or slds.osu.edu