

ECONOMICS 743: ADVANCED MICROECONOMIC THEORY II

Fall 2009
MW 9:30am – 10:45am
Bryan 456

Professor Garth Heutel
Email: gaheutel@uncg.edu
Office: Bryan 446 (Ph: 336 334 4872)
Office Hours: MW 11:00am-12:00pm

This course is part of the PhD theory sequence. The course will have two main sections: game theory and information economics. The first section will cover both static games and dynamic games. The second section will cover adverse selection, signaling, screening, and the principal-agent problem.

Course Materials

We will primarily work with the textbook *Microeconomic Theory* by Mas-Colell, Whinston and Green (MWG). Additional materials may come from other textbooks or journal articles; whenever required these will be made available by me.

Other textbooks that you may find helpful: *Game Theory for Applied Economists* by Gibbons, *Microeconomic Theory* by Nicholson, *An Introduction to the Economics of Information* by Macho-Stadler and Perez-Castillo, and *Contract Theory* by Bolton and Dewatripont.

We will in particular be working on the following chapters in MWG: 7–9 (game theory), and 13–14 (information). We may also discuss parts of chapter 12 (market power) and chapter 23 (mechanism design).

The assigned readings in the course schedule below are to be read before that day of class.

Assignments and Grades

Grades will be determined according to the following allocation of points:

- | | |
|--------------------------------|---------------------|
| • Problem sets | 20% of course grade |
| • Midterm #1 | 20% of course grade |
| • Midterm #2 | 20% of course grade |
| • Final Examination | 30% of course grade |
| • Attendance and Participation | 10% of course grade |

Problem Sets

Problem sets (aka homework) will be assigned about every week (never more than one a week; some may cover two weeks). Problem sets *must* be done individually but *may* be turned in in groups of up to four students. That is, each student must attempt each problem on his or her own, but students may (and are encouraged to) meet in groups to compare answers and turn in one final product. All students in a group are responsible for the entire assignment, and each group is expected to ensure that every

group member fully understands the completed assignment. Problem sets are typically drawn from exercises in MWG and are representative of problems that will appear on the midterms and finals.

Midterms

Two in-class midterm exams will be held on **Wednesday, October 7th** and **Monday, November 9th**. The first midterm will cover most of the game theory section of the class. The second midterm will cover the remaining game theory section and some of the information section. Midterms are to be done independently, in class, without use of notes or textbooks.

Final Examination

The final examination is scheduled **for Wednesday, December 9 at 12noon – 3pm**, in the regular class meeting room (Bryan 456). The final will cover all material in the course. It will not over-represent material presented after the second midterm. It is to be done without use of notes or textbooks.

Attendance and Participation

Half of this portion of the grade will depend on the student being present and punctual. Half will depend on the student reasonably participating in class, either by asking questions or responding when called upon.

COURSE SCHEDULE

Monday	Wednesday
8/24 – 1 Introduction Game Theory: MWG 7.A, 7.B	8/26 – 2 Game Theory: MWG 7.C
8/31 – 3 Game Theory: MWG 7.D	9/2 – 4 Game Theory: MWG 7.E
9/7 – Labor day; no class	9/9 – 5 Game Theory: MWG 8.A, 8.B
9/14 – 6 Game Theory: MWG 8.C	9/16 – 7 Game Theory: MWG 8.D
9/21 – 8 Game Theory: MWG 8.E	9/23 – 9 Game Theory: MWG 8.F
9/28 – 10 Game Theory: MWG 9.A, 9.B	9/30 – 11 Game Theory: MWG 9.B
10/5 – 12 Review	10/7 – 13 Midterm #1
10/12 – Fall break; no class	10/14 – 14 Review Midterm #1 Game Theory: MWG 9.C

10/19 – 15 Game Theory: MWG 9.D	10/21 – 16 Information: MWG 13.A, 13.B
10/26 – 17 Information: MWG 13.B	10/28 – 18 Information: MWG 13.C
11/2 – 19 Information: MWG 13.C	11/4 – 20 Review
11/9 – 21 Midterm #2	11/11 – 22 Review Midterm #2 Information: MWG 13.D
11/16 – 23 Information: MWG 13.D	11/18 – 24 Information: MWG 14.A, 14.B
11/23 – 25 Information: MWG 14.B	11/25 – Thanksgiving break; no class
11/30 – 26 Information: MWG 14.C	12/2 – 27 Information: MWG 14.C, 14.D
12/7 – 28 Review	12/9 – Final exam; 12 noon – 3pm, Bryan 456

Suggested readings

Akerlof, G. "The Market for Lemons: Qualitative Uncertainty and the Market Mechanism." *Quarterly Journal of Economics*, 84 (3), 1970, p. 488-500

Spence, M. "Job Market Signaling." *Quarterly Journal of Economics*, 87, 1973, p. 355-374

Rothschild, M. and J. Stiglitz. "Equilibrium in Competitive Insurance Markets: The Economics of Imperfect Information." *Quarterly Journal of Economics*, 90, 1976, p. 541-562.

Danzon, Patricia and Mark Pauly. "Affiliation: Health Insurance and the Growth in Pharmaceutical Expenditures." *Journal of Law and Economics*, 45 (2), October 2002, p. 587-613.

Vera-Hernandez, Marcos. "Structural Estimation of a Principal-Agent Model: Moral Hazard in Medical Insurance." *RAND Journal of Economics*, 34 (4), Winter 2003, p. 670-693.

Lazear, Edward and Sherwin Rosen. "Rank-Order Tournaments as Optimum Labor Contracts." *Journal of Political Economy*, 89 (5), October 1981, p. 841-864.

Coles, Melvyn and Adrian Masters. "Optimal Unemployment Insurance in a Matching Equilibrium." *Journal of Labor Economics*, 24 (1), January 2006, p. 109-138.

Barron, John, Mark Berger and Dan Black. "Selective Counteroffers." *Journal of Labor Economics*, 24 (3), July 2006, p. 385-409.

Farnworth, Michael. "A Game Theoretic Model of the Relationship Between Prices and Waiting Times." *Journal of Health Economics*, 22 (1), January 2003, p. 47-60.

Pecorino, Paul. "Should the US Allow Prescription Drug Reimports from Canada?" *Journal of Health Economics*, 21 (4), July 2002, p. 699-708.

Bolin, Kristian, Lena Jacobson and Bjorn Lindgren. "The Family as the Health Producer—When Spouses Act Strategically." *Journal of Health Economics*, 21 (3), May 2002, p. 475-495.

Bolin, Kristian, Lena Jacobson and Bjorn Lindgren. "The Family as the Health Producer—When Spouses are Nash-Bargainers." *Journal of Health Economics*, 20 (3), May 2001, p. 349-362.

Kubler, Dorothea, Wieland Muller and Hans-Theo Normann. "Job-Market Signaling and Screening: An Experimental Comparison." *Games and Economic Behavior*, 64 (1), September 2008, p. 219-236.

Does Monitoring Decrease Work Effort? The Complementarity Between Agency and Crowding-Out Theories." *Games and Economic Behavior*, 63 (1), May 2008, p. 56-76.