

Economics 7006 Microeconomic Theory

Instructor: Subhasish Dugar
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Lecture Location: GC 3635
Lecture Days/Time: MW 9:00 AM – 10:20 AM

Preferred Communication Mode: Email
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Office Hours: By appointment

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Textbook: Strictly speaking, I will not follow any textbooks. Instead, I will teach from my personal notes, which is how most of the graduate level game theory courses are taught. This is because a single book most often fails to meet all the properties (notation, coverage, examples, exercises, etc.) of a “desirable text book”. If you want a reference book to use as a supplement, I have a few suggestions (not in my order of preference).

Robert Gibbons, *Game Theory for Applied Economists*, Princeton University Press, 1992.

Andreu Mas-Collel, Michael Whinston, and Jerry Green, *Microeconomic Theory*, Oxford University Press, 1995.

Geoffrey A. Jehle and Philip J. Reny, *Advanced Microeconomic Theory*, Pearson, 2011.

Drew Fudenberg and Jean Tirole, *Game Theory*, The MIT Press, 1991.

Hal Varian, *Microeconomic Analysis*, W. W. Norton & Company, 1992.

Any editions of the listed books will serve your purpose. For a few topics I may distribute lecture notes.

Books on Reserve:

Drew Fudenberg and Jean Tirole, *Game Theory*, The MIT Press, 1991.

Robert Gibbons, *Game Theory for Applied Economists*, Princeton University Press, 1992.

Andreu Mas-Collel, Michael Whinston, and Jerry Green, *Microeconomic Theory*, Oxford University Press, 1995.

Geoffrey A. Jehle and Philip J. Reny, *Advanced Microeconomic Theory*, Pearson, 2011.

Hal Varian, *Microeconomic Analysis*, W. W. Norton & Company, 1992.

Course Description: This is an advanced course in microeconomic theory. The course is purely theoretical in nature. The goal of the course is to introduce you to a self-contained analysis of some of the major building blocks of microeconomic theory: choice under risk and uncertainty, game theory, information economics, and social choice. Some of the topics listed above may not be covered if we run out of time. This course is designed to meet the needs of students in an economics Ph.D. program. Some parts of the course are designed to teach material that all graduate students should know. Others are used to introduce methodologies.

(Tentative) Content Overview: Risk and Uncertainty, Games in Strategic Form and Nash Equilibrium, Dominated Strategies, Mixed-Strategy Nash Equilibrium, Extensive Form Games, Behavioral Strategies, Strategic Form Representation of Normal Form Games, Backward Induction and Subgame Perfection, Bayesian Games and Bayesian Equilibrium, Perfect Bayesian Equilibrium, The Basic Signaling Games,

Moral Hazard and Incentives, Adverse Selection, Social Preferences, Arrow's Impossibility Theorem, Social Choice Functions, The Utility Possibility Sets, Axiomatic Bargaining Theory.

Course Materials: From time to time some course materials will be posted on Canvas. It's your responsibility to check Canvas accordingly. I will, of course, alert you to such postings. Sometimes I will send you course related emails to your registered email address. It's your responsibility to check emails accordingly.

Evaluation Methods and Criteria: There will be two midterms and a final, all given in class.

Midterm Exam I: February 6

Midterm Exam II: March 20

Final Exam: Take home exam due on April 22 (tentative; to be discussed in class)

All examinations will be closed-book and closed notes and will be comprehensive in nature.

The midterms will be worth 25% each and final will be worth 40% of your final grade.

Students who are unable to write a midterm must receive my permission to miss an exam before the scheduled exam date. To get my permission, you must give me notice at least a week before the class takes its exam. You must supply written evidence of your reason for missing the in-class exam. If the reason is illness, a note from a doctor will be sufficient. If the reason is not illness, I will let you know if I think your reason is good enough to warrant letting you miss the exam. If your reason is that you are participating in a university sponsored activity or if you have a religious purpose, I will always allow you to miss the exam. Otherwise, I will make the decision on a case-by-case basis. Students who are unable to write a midterm will have the midterm weight shifted to the final examination. Documentation MUST be provided.

Four assignments will be given in class and must be handed in for marking. These assignments will represent the remaining 10% of your final grade, each assignment weighing 2.5%. All assignments must be handed in by all individuals in the class, including anyone who is auditing or just sitting in for fun. In addition, please note: A PASSING GRADE ON ASSIGNMENTS IS A NECESSARY CONDITION FOR PASSING THE COURSE. Assignments must be submitted before the start of the class. No exceptions will be entertained.

Assignment 1. TBA

Assignment 2. TBA

Assignment 3. TBA

Assignment 4. TBA

Midterms and final exam are marked on a numerical basis, then converted to letter grades. The course grade is then calculated using the weights indicated above. As a guide to determining standing, these letter grade equivalences will apply:

A \geq 93%

93% > A \geq 90%

90% > B+ \geq 87%

87% > B \geq 83%

83% > B- \geq 80%

80% > C+ \geq 77%

77% > C \geq 73%

73% > C- ≥ 70%
70% > D+ ≥ 65%
65% > D ≥ 60%
60% > D- ≥ 50%
50% > E

If you have questions regarding grading of an exam question, you must ask within **two weeks** from the day the graded exam is handed back in the class. No exceptions to this rule will be entertained.

Notes:

- **Academic Code of Conduct Statement**
Cheating on exams and other forms of academic dishonesty may lead to expulsion from the class, failure of the class, or more severe penalties such as dismissal from the University. In accordance with University regulations. For related University policy, please refer to this link: <http://regulations.utah.edu/academics/6-400.php> (Section I). If you are caught cheating in this class, I must send a letter to your dean about that, and the letter will be put in your permanent University file. I punish cheating quite severely.
- **The Americans with Disabilities Act (ADA) Statement**
The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 801-581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.
- **Addressing Sexual Misconduct Statement**
Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).
- **Wellness Statement**
Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at www.wellness.utah.edu or 801-581-7776.
- **Student Names and Personal Pronouns Statement**
Class rosters are provided to the instructor with the student's legal name as well as "Preferred first name" (if previously entered by you in the Student Profile section of your CIS account). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class, on papers, exams, group

projects, etc. Please advise me of any name or pronoun changes (and update CIS) so I can help create a learning environment in which you, your name, and your pronoun will be respected. If you need assistance getting your preferred name on your UIDcard, please visit the LGBT Resource Center Room 409 in the Olpin Union Building, or email bpeacock@sa.utah.edu to schedule a time to drop by. The LGBT Resource Center hours are M-F 8am-5pm, and 8am-6pm on Tuesdays.

- **Non-Contract Note**

This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas under Announcements.