Syllabus Economics 9010 (Advanced Microeconomics I)
Fall 2021
Prof. Spencer Banzhaf.
Georgia State Univ.

This course is intended for PhD students in economics, risk management, finance, real estate, political science, or other related fields. Topics include consumer behavior, "rationality" axioms in economics, risk and uncertainty, producer theory, partial equilibrium, and public goods & externalities.

Office Hours & Contact

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Office Hours are officially from 2:30-4:30 on Mondays. You can visit me in person, set up a zoom meeting, or call me during that time. I am available other times by appointment or by chance. Email works for quick logistical questions. I will not answer substantive questions by email. If you write with such questions, I will ask you to call.

Text:

Advanced Microeconomic Theory, by Geoffrey A. Jehle and Philip J. Reny, 3rd ed., 2011, Addison-Wesley.

You may also want to go outside our textbook for alternative representations of the ideas we're learning. Other recommended books are *Microeconomic Theory* by A. Mas-Colell, M.D. Whinston, and J.R. Green and *Microeconomic Foundations I* by D.M. Kreps.

As references, you will also want to have a good undergraduate intermediate micro text in one hand (e.g. T. Nechyba's *Microeconomics: An Intuitive Approach with Calculus* or *A Short Course in Intermediate Microeconomics with Calculus* by Serrano & Feldman) and a math-for-econ text in the other (e.g. Simon & Blume's *Mathematics for Economists*). New students to economics will also want to have a principles book.

An excellent reference on the web is Martin Osborne's tutorial on math/econ at the Univ. of Toronto (click the <contents> tab at the top):
http://www.economics.utoronto.ca/osborne/MathTutorial/index.html.

Finally, there will be other readings assigned or suggested outside the textbook.

Topics:

About half of the semester will focus on consumer theory, or the "demand" side of supply-and-demand (i.e. chapters 1-2 in Jehle-Reny). We will then cover producer theory, or the supply side, more rapidly (ch. 3). We then will bring supply and demand together in "partial equilibrium" (ch. 4). Finally, we will consider questions in introductory industrial organization and public finance.

Grades:

Grades will be based on two in-class exams (22.5% each), a final exam (30%), and homework & class participation (25%). If you miss an exam for any reason, the weight of the exam will be transferred to the final.

The core essence of microeconomics is taught in "principles" courses. Mastering the basics is essential for tackling the advanced material in this class. Accordingly, you will be required to pass an exam from our department in principles of microeconomics (the first introductory undergraduate course). The exam will be offered five times during the semester. There are no restrictions on the number of times you take it (up to five). If your highest grade is an 85% or higher, this exam has no effect on your grade. If your highest score is less than 85%, your final grade in this class will be no higher than your grade in the principles exam.

Requests for re-grading exams and homework must be made in writing, with an explanation for the appeal. Items will then be re-graded in their entirety, with the possibility of a lower grade.

Late homework will be deducted 10 points. After the third day, they will be deducted 3 points per day.

Assignments:

Readings and homework will be posted on the class webpage (on iCollege).

Study groups are essential to your success in the class and, more importantly, in the comps. You *must* do homework in groups of 4-6 people. I recommend groups with a mix of nationalities and majors.

All students are expected to know the university policy on Academic Honesty. See: https://codeofconduct.gsu.edu/files/2018/10/2018_2019_Academic_Honesty.pdf

Course Learning Outcomes:

The main learning outcome of the course is that students will understand the basic tools of microeconomic theory. Specifically, the student should be able to:

1. understand and utilize the axioms of consumer rationality.
2. understand the relationship between preference orderings, utility functions, and choice functions.
3. solve consumer optimization problems.
4. define and understand duality theory as it applies to consumer theory. This includes Marshallian demand and indirect utility and Hicksian demand and the expenditure function.
5. understand individual welfare measures (Marshallian and Hicksian surpluses).
6. understand firms' choice of outputs and inputs, and understand duality as it applies to producer theory (profit maximization, cost minimization).
7. understand firms' behavior in competitive and non-competitive conditions.
8. understand the basic rules for the optimal provision of public goods

Disclaimer: The course syllabus provides a general plan for the course; deviations may be necessary.

Likely Reading Schedule. See iCollege for updates.

Aug 23: Background
*Jehle-Reny [JR] Section 1.1 (pp. 3-4)
*JR Math Appendices A.1

Aug 25, **26**: Consumer Preferences
Note: Meeting Aug 26 in Prof. Kim's macro slot, Aderhold 330, 11-12:15
*JR Section 1.2

Aug 30, Sept 1
Utility maximization
*JR Section 1.3
*Sept 8: Homework 1 due, written, 1 assignment turned in per group (by email)

No class week of Sept 6th -- xtra macro instead

Sept 13: Value functions (indirect utility)
*Review envelope theorem (appendix or math/econ book)
*JR Section 1.4

Sept 15, 20: Consumer demand along w value functions cont'd; Expenditure Minimization
*JR Section 1.5
*Optional: P Cook, "A 'One Line' Proof of the Slutsky Equation," AER 1972

Sept 22: Homework 2 due, presented at board

Sept 27: Individual welfare
*JR Section 4.3.1 (pp. 179-183)

Sept 29. First midterm exam. Covers Appendix A1, Chapter 1, and 4.3.1.

Oct 4: Integrability
*JR Sections 2.1 & 2.2

Oct 6, 11: Revealed preference
*JR Section 2.3
*Hal R. Varian, *Microeconomic Analysis,* 3rd ed., Section 8.8 (Afriat's Thm.), pp. 133-5.
*Wade Hands, "Economics, Psychology, and the History of Consumer Choice Theory,"
Cambridge Journal of Economics, 2010

Oct 13, 18, 20, 25: Risk and uncertainty
*Mas-Colell et al. Ch 6 (provided in iCollege)
*Optional: Ivan Moscati, 2016, "How Economists Came to Accept Expected Utility Theory:
The Case of Samuelson and Savage," *Journal of Economic Perspectives* 30(2), pp. 219-36.
*Optional: JR Section 2.4
*Oct 13: Homework #3, written.
*Oct 25: Homework #4, at board

Oct 27: Exam II covering JR 2.1-2.3, MWG 6

Nov 1, 3: Theory of the firm (production and supply)
*JR Ch. 3

*Nov 8: Partial equilibrium under perfect competition
*JR Section 4.1, remainder of 4.3 (i.e. 4.3.2 & 4.3.3)
*F Hayek, "The Use of Knowledge in Society," AER 1945

Nov 10. Homework #5, at board

Nov 15: Perfect Competition cont'd, Pure monopoly
*JR pp. 170-71 (first two pages of 4.2)

Nov 17 Oligopoly
*Remainder of JR Section 4.2 (pp. 172-179)
*H. Varian, Microeconomic analysis, 3rd ed., pp. 241-253 (available in iCollege)

THANKSGIVING

Nov 29, Oligopoly cont'd

Dec 1, 6: Public Economics: Taxes, Public Goods, and Externalities
*H. Varian, Microeconomic analysis, 3rd ed., pp. 410-23, 432-39 (iCollege)
*Dec 1: Homework 6 due

Dec 8, 10:45-1:15. Final exam in regular room.