Economics 121: Intermediate Microeconomics

Yale University, Department of Economics

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Spring 2018

Monday & Wednesday, 1:00 - 2:15 pm

Office hours: Monday, 4 - 6 pm

(or by appointment)

Teaching Assistants:

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Course Description

This course introduces the major theories of microeconomics. Topics include consumer preferences and utility; demand relationships among goods; labor supply; uncertainty and risk; production and costs; welfare; behavior of firms; the benefits of monopoly; price discrimination; public goods and externalities; asymmetric information and the lemons problem; signaling; moral hazard and adverse selection; current policy issues on antitrust regulation & innovation.

This course will often motivate the analysis of economic concepts using case studies and empirical facts. It will also consider simple economic models to explain individual behavior. The primary tool for understanding firm, consumer or government choices is the maximization paradigm which assumes individuals behave as if they maximize an objective function; such functions may represent the level of profits, happiness or social welfare. Thus, much of the course will be devoted to applying that paradigm to various settings. The academic objective of this course is to elaborate students' skills in using theoretical tools to formulate and solve economic problems. The goal is for the students gain a deep understanding of the economic aspects of individuals' and firms' decisions.

Course website

This course uses **Yale Canvas** as the course website. Students registered for the course may log in at http://canvas.yale.edu/. This website will be used to post announcements, copies of all lecture notes, class handouts, problem sets, answer keys, and most readings. A sample of (next day's) lecture notes will also be available on Canvas before each class.

Prerequisite

A course in introductory microeconomics (Economics 110 or 115) and a course in mathematics at the level of calculus or higher (Math 112, 115, 118 or 120) are the prerequisites for this class. You

do not need to take multi-variable calculus before taking Econ 121.

Readings

The lecture notes will be posted over the course on the homepage to reflect the current lectures.

Main textbook: *Walter Nicholson and Christopher Snyder, Microeconomic Theory: Basic Principles and Extensions (Thomson/South-Western).*

Selected readings from recent research and case studies will also be assigned.

Another good text, that you may also use, depending on your personal preference:

- *Jeffrey M. Perloff, Microeconomics: Theory and Applications with Calculus (Pearson/Addison-Wesley, 3rd edition, 2013).*

Supplementary books:

- *Hall R. Varian, Intermediate Microeconomics with Calculus (Norton, 1st edition, 2014)*

- *Grady Klein and Yoraum Bauman , The Cartoon Guide to Economics, Volume I: Microeconomics (Farrar, Straus and Giroux, 2010).*

- *Church, Jeffrey and Roger Ware, 2000, Industrial Organization: A Strategic Approach (Irwin McGraw-Hill).* Available in PDF format at http://works.bepress.com/jeffrey_church/23

Problem Sets

Problem sets will be assigned (almost every week). They must be received in class by the end of lecture on the day the problem set is due. Problem sets are a critical component of the course. Working through the problem sets (solving or at least trying to solve them) is the key to understanding the course material (and preparing for the midterm and final exams). Some exercises will also be discussed in class. Team work is encouraged in homework assignments. However, problem set solutions should be written up individually. You also need to show how you arrived at the mathematical solution and explain your steps. If no problem sets are missed, the lowest grade will be dropped. We will not be granting extensions to problem sets, unless you have a letter from your college Dean.

Discussion Sections

Discussion sections will meet weekly. You will register for sections using the discussion section preference selection tool. Selection closes at 9:00 am on Friday, January 19. If you do not sign up before closing, you will need to go to OCS (online course selection), beginning Monday, January 22, to try to find an open seat.

Grading

The course grade will be the weighted average of the following:

Midterm exam I (Wednesday, February 14): 25%

Midterm exam II (Monday, April 2): 25%

Problem sets: 20%

Final exam: 30%

- The distribution of grades in this class will be approximately the following:

A and A- (50%, of which about 1/3 will be A)

B (45%, most of which will be straight B grades, with a few B- and B+)

C and lower, and withdrawals after the first midterm (5%, with grades lower than C being quite rare).

- When doing these calculations, students who take the first midterm and then withdraw from the class will remain in the distribution.

- If you have questions about exam grading, you should first compare your answer to the posted solution. If you would like a score to be reconsidered, your next step is to give your exam and a written request, explaining why you think reconsideration is appropriate, to your TA. Such requests must be confined to a single question. In order to consider all such requests together and in a timely manner, requests must be submitted by the end of the week following that in which exams are returned. Adjustments in partial credit are typically not made. If an adjustment is made, the exam may be referred to an independent grader, who will review the question and assign a replacement grade that may be higher or lower than the original, and then will check whether other questions on the exam also warrant reconsideration.

- All exams will be based on lectures, class discussions, problem sets and readings assigned during the course.

- You are required to inform your TA of any known conflict as soon as possible but no later than two weeks before the date of examination.

- A missed exam without a Dean's excuse will result in a failing grade.

⇒ Help me prioritize your emails by including in the subject line the course code "Econ121".

Remarks

- Lectures are not self-contained. It is not expected that you will be able to follow a lecture if you have gaps in your knowledge from prior lectures.

- It is not expected that understanding the lecture notes will prepare you to perform well in the exams. Successfully completing the problem sets *and* reading the covered sections of the textbooks are necessary components for such preparation.

- Academic Integrity: Violations of academic integrity as given in "Undergraduate Regulations" will be taken seriously. See http://yalecollege.yale.edu/campus-life/undergraduate-regulations.

Students assistance

If you receive services through the Resource Office on Disabilities and require accommodations for this class (note taking assistance, extended time for tests, etc.), please, make an appointment with me as soon as possible to discuss your approved accommodation needs. I will hold any information you share with me in the strictest confidence.

If you need help with your writing skills, you can contact the Yale College Writing Center. See http://writing.yalecollege.yale.edu/writing-yale.

Lectures

The lectures are the core elements of the course. Following is a sketch of topics we are likely to cover (some modifications are likely along the way).

⇒ The required and recommended readings for each class will be listed in the last slide of the lecture notes. Some recommended readings:

Preferences and Constraints

- Mathematics of optimization; Envelope theorem; Inequality constrains

Shubik, M. (1970), A Curmudgeon's Guide to Microeconomics, Journal of Economic Literature, Vol. 8 (2), pp. 405-434

Becker, W. E. (1997), Teaching Economics to Undergraduates, Journal of Economic Literature, Vol. 35 (3), pp. 1347-1373

Utility and Choices

- Demand functions; Indirect utility; Utility maximization; Expenditure minimization; Elasticities

Berry, S., Levinsohn, J. and A. Pakes (1995), Automobile Prices in Market Equilibrium, Econometrica, Vol. 63 (4), pp. 841-890

Currie, J., DellaVigna, S., Moretti, E. and V. Pathania (2010), The Effect of Fast Food Restaurants on Obesity and Weight Gain, American Economic Journal: Economic Policy, Vol. 2, pp. 32-63

Saffer, H. and F. Chaloupka (1999), The demand for illicit drugs, Economic Inquiry, Vol. 37 (3), pp. 401-411

Becker, G. S., Murphy, K. M. and M. Grossman (2006), The Market for Illegal Goods: The Case of Drugs, Journal of Political Economy, Vol. 114 (1), pp. 38-60

Van Ours, J. C. (1995), The Price Elasticity of Hard Drugs: The Case of Opium in the Dutch East Indies, 1923-1938, Journal of Political Economy, Vol. 103 (2), pp. 261-279

Labor supply

- Allocation of time; Labor market equilibrium

Jensen, R. T. and N. H. Miller (2008), Giffen Behavior and Subsistence Consumption, American Economic Review, Vol. 98 (4), pp. 1553-1577

Cooper, S. T. and E. Cohn (1997), Internal Rates of Return to College Education in the United States by Sex and Race, Journal of Education Finance, Vol. 23 (1), pp. 101-133

Consumer surplus

Cicchetti, C. J., Fisher, A. C. and V. K. Smith (1976), An Econometric Evaluation of a Generalized Consumer Surplus Measure: The Mineral King, Econometrica, Vol. 44 (6), pp. 1259-1276

Willig, R. D. (1976), Consumer's Surplus Without Apology, The American Economic Review, Vol. 66 (4), pp. 589-597

Uncertainty and Valuing life

- Risk aversion; Expected utility; Diversification; Insurance

Slonim, R., Wang, C. and E. Garbarino (2014), The Market for Blood, Journal of Economic Perspectives, Vol. 28 (2), pp. 177-196

Andreoni, J. and J. Miller (2002), Giving According to GARP: An Experimental Test of the Consistency of Preferences for Altruism, Econometrica, Vol. 70 (2), pp. 737-753

Kagel, J. H., Battalio, R. C., Rachlin, H. and L. Green (1981), Demand Curves for Animal Consumers, Quarterly Journal of Economics, Vol. 96 (1), pp. 1-16

Firms' profits

- Marginal productivity; Rate of technical substitution; Returns to scale; Costs; Elasticity of substitution; Profit maximization

Hsieh, W.-J. (1995), Test of variable output and scale elasticities for 20 US manufacturing industries, Applied Economics Letters, Vol. 2 (8), pp. 284-287

Tian, W. and G. H. Wan (2000), Technical Efficiency and Its Determinants in China's Grain Production, Journal of Productivity Analysis, Vol. 13, pp. 159-174

Competitive equilibrium and Production economies

- Market demand; Price determination; Economic efficiency and welfare

Dunne, T., Roberts, M. J. and L. Samuelson (1988), Patterns of Firms Entry and Exit in US Manufacturing Industries, RAND Journal of Economics, Vol. 19 (4), pp. 495-515

Zwicker, W. S. (1987), Playing Games with Games: The Hypergame Paradox, American Mathematical Monthly, Vol. 94 (6), pp. 507-514

Christensen, L. R. and W. H. Greene (1976), Economies of Scale in U.S. Electric Power Generation, Journal of Political Economy, Vol. 84 (4), Part 1, pp. 655-676

Monopoly and Oligopoly

- Barriers to entry; Price discrimination; Product differentiation; Externalities

Hausman, J. A. and G. K. Leonard (1997), Superstars in the National Basketball Association: Economic Value and Policy, Journal of Labor Economics, Vol. 15 (4), pp. 586-624

Anderson, M. and M. Auffhammer (2011), Pounds That Kill: The External Costs of Vehicle Weight, University of California, Berkeley, working paper.

White, M. J. (2004), The "Arms Race" on American Roads: The Effect of Sport Utility Vehicles and Pickup Trucks on Traffic Safety, Journal of Law and Economics, Vol. 47 (2), pp. 333-355

Information

- Signaling; Adverse selection; Moral hazard

Clark, D. and P. Martorell (2014), The Signaling Value of a High School Diploma, Journal of Political Economy, Vol. 122 (2), pp. 282-318

Dewan, S. and V. Hsu (2004), Adverse Selection in Electronic Markets: Evidence from Online Stamp Auctions, Journal of Industrial Economics, Vol. 52 (4), pp. 497-516

Dunham, W. R. (2003), Moral Hazard and the Market for Used Automobiles, Review of Industrial Organization, Vol. 23, pp. 65-83