Economics 205 Syllabus
Summer Term II 2018

Logistics

Course:	Microeconomic Theory (with calculus)
Lecture:	Monday, Tuesday, and Thursday 12:30 to 2:35 in LSRC A156
Discussion:	Monday 5:00 to 7:05 in Old Chemistry 003
Instructor:	Drew Vollmer
Email:	drew.vollmer@duke.edu
Office Location:	Social Sciences 325G
Office Hours:	3:00 to 4:00 Tuesday
	3:00 to 5:00 Thursday
	3:00 to 4:00 Friday
	Or by appointment

Description and Objectives

Our goal is to build models in which individual agents (generally consumers and firms) make economic decisions, analyze them mathematically, and use them to build a market equilibrium. The first third of the course focuses on consumer theory, the second third on producer theory and equilibrium, and the last third on game theory and improving the producer model.

There are two levels of objectives for students. The first and simpler level is to be able to apply the models to make predictions about consumer and firm behavior. The second and deeper level is to identify the components of an economic model, question its assumptions, analyze it mathematically, and interpret the conclusions in economic terms.

Materials

1. **Lectures.** The essential material for the course will be presented in lecture. If students need to know anything that is not presented in lecture, I will explicitly say so.

2. **Course Notes.** Instead of a textbook, the main reference material is Professor Curtis Taylor's lecture notes from his 205 course, posted on Sakai.

3. **Other Texts.** There is no mandatory text, but students who want to consult a textbook can read Nicholson and Snyder's *Microeconomic Theory: Principles and Extensions* or Nechyba's *Microeconomics: An Intuitive Approach with Calculus*. Both are on reserve at Perkins library.

Grading

Grades are determined by performance on two midterm exams (30% each) and a final exam (40%). Grades will be adjusted upwards until the median grade is 85 (but not down if the median is above 85). Scores of 97+ receive an A+, 93–96 receive an A, and 90–92 receive an A-. Similarly, 87–89 is a B+, 83–86 a B, and so on.

Earning full points on all homework adds a bonus half-point to your grade. (For problem set grading, see the section on problem sets.)

Exam Rules: Exams are closed-book and closed-note. no calculators allowed.
Missed Exams: Make-up tests will not be given for midterm exams. If you miss a midterm, your final exam will be reweighted to count for the test you missed. There is a make-up final for students with a dean's excuse.
Regrades: To request a regrade, submit a one-page typed petition describing the error in grading. Petitions must be submitted within 24 hours of when the exam was returned. I will decide whether to regrade based on the petition.
Missing Pages: If pages are missing from your midterm exam, the missing questions will receive a score of zero. If pages are missing from your final exam, you may request a make-up final.
Special Accommodations: If you qualify for special exam accommodations, then you must present the letter certifying it to me in the first week of class. You must contact me at least one week before each exam to organize the accommodations.

Problem Sets

Weekly Problem Sets. Problem sets are required and graded for completion. There are six, each due at the start of Monday's lecture (unless otherwise noted; the last will be due at the final exam). Grading is on a two-point scale:

- Two points for work that is complete: work is shown and answers explained.

- One point for work that is partially complete: some work is missing or some problems were not attempted.

- Zero points for no submission.

Weekly problem sets are the best source of practice for course material and preparation for the exam.

Optional Practice Problems. In addition to weekly problem sets, I will post optional practice problems for each lecture up until the second midterm. Solutions are not required and will be neither collected nor graded. They consist of one or two short problems similar to examples from class. The goal is to help keep up in the condensed course.

Class

Class time will be used for lectures and exercises. There will be a few exercises in each lecture, which students will solve in small groups. The purpose is to attempt a solution instead of seeing it presented as an example.

Discussion Sections

In the weekly discussion section, I will revisit difficult homework problems and topics from lecture, offer tips on solving problems, and go over practice problems (typically from old exams). Students might be asked to solve the practice problem during the discussion before I present a solution. I will post the problems ahead of discussion and mention whether you will be asked to solve it in section. (If not, you might want to try it beforehand.) Students do not need to submit solutions in any case.

Notes

- Historically, about 30% of the final grades received in this class are C's or worse. You are strongly encouraged to ask for help early in the semester if you find yourself struggling.

- Exams will only include material covered in class and discussion, or material that I explicitly say will be on exams.

- You are strongly encouraged to attend class and discussion.

- Please silence and do not use phones in class. Computers and tablets should only be used for course material.

- I will ask for feedback periodically to improve lecture.

Academic Integrity

Students are encouraged to work together on problem sets and discuss their solutions (outside of class). Colluding, copying, or using unauthorized reference materials during exams is not allowed. In general, students are expected to uphold the Duke Community Standard (honor code), http://studentaffairs.duke.edu/conduct/about-us/duke-community-standard.

Course Outline

- The reading column is optional and included for reference. The pages and chapters refer to Nicholson and Snyder's text, *Microeconomic Theory: Principles and Extensions.*

- Problem sets are due on Mondays (marked with an asterisk), except for the final problem set, due at the final exam.

- The order of topics will not change, but we might reach some a day early and others a day late.

DATE	TOPIC	REFERENCE	COURSE NOTES
7/2	Course Overview and Preferences	Ch. 1 and Ch. 3 (all)	Lec1, Lec2
7/3	The Consumer Model	Ch. 4 (pp. 117–140)	Lec3, Lec4
		Ch. 5 (pp. 145–155)	
7/5	Consumer Welfare	Ch. 5 (pp. 155–174)	Lec4, Lec5
7/9*	Applications	Ch. 16 (pp. 584–588)	Lec6, Lec7
		Ch. 17 (pp. 611–616)	
7/10	Risk and Uncertainty	Ch. 7 (pp. 209–224)	Lec8
7/12	Risk and Catch Up		
7/16*	Producer Theory	Ch. 9, 10, and 11 (all)	Lec9, Lec10, Lec11
7/17	**Midterm Exam 1** (in class)		
7/19	Producer Theory, continued		
7/23*	Partial Equilibrium	Ch. 12 (pp. 409–419)	Lec12
7/24	Pecuniary Externalities and Rent	Ch. 12 (pp. 419–446)	Lec13
7/26	General Equilibrium	Ch. 13 (pp. 457–489)	Lec14
7/30*	GE with Production		Lec15
		Ch. 14 (pp. 499–510)	Lec17
7/31	**Midterm Exam 2** (in class)		
8/1	Externalities; Monopoly	Ch. 19 (pp. 685–700)	Lec16
		Ch. 14 (pp. 513–523)	Lec17, Lec18
8/6*	Introduction to Game Theory	Ch. 8 (pp. 251–266)	Lec19
8/7	Oligopoly	Ch. 15 (pp. 531–546)	Lec20
8/9	Catch Up and Recap		
8/10*	**Final Exam** 7–10 PM		