#### ECON 101 (Fall 2014) Intermediate Microeconomics Rakesh Vohra

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### Description

Microeconomics is the formal study of how individuals respond to incentives and how their repsonses influence social outcomes. The principal themes of the course will be the theory of consumer and producer (firm) behavior, the equilibrium reached between these individuals when markets are perfectly competitive, and what happens when markets are imperfect, or fail entirely. This course emphasizes the development of the mathematical tools needed to reason carefully about incentives and necessitates a taste for long chains of reasoning (see below for prerequisites).

What you will *not* get from this course is a laundry list of facts to memorize or recipies to follow. Rather, its purpose is to change the way you think. This will be done by posing questions whose answers will challenge your intuition. What will be important is not just recording the answers but understanding the reasoning process by which one arrives at them. It is the reasoning process rather than the answer itself that you should absorb.

The course requires that you perform some computations and these will take practice. The computations by themselves are unimportant but are useful at various points to convince yourself of things that you might at first disbelieve. To get practice at these things there will be regular homework assignments as well as recitation sessions. In the recitation sessions, the TA will cover problems from a file or review problems posted on CANVAS (which I will announce in class or via e-mail). The problems in each session are selected to mirror those on the homeworks. The answers to each of the review problems are included. The review sessions are for practice at the problems. Larger questions about relevance of the course to this and that should be addressed to me. Some, but not all, of the problems are of the cookbook variety. The non-cookbook problems are designed to tax your reasoning faculties rather than ability to pattern match.

This class is not a spectator sport. Simply inspecting the answer to a problem or following the reasoning is insufficient; one needs to attempt problems and try to work through difficulties on one's own before turning to the solution. If thinking were easy, everyone would be doing it.

### **Prerequisites**

Introductory microeconomics and macroeconomics (Econ 1 and 2); Math 104 and Math 114 or 115 OR students who have received a B+ or better in Math 104 may take Econ 101 and Math 114 or 115 concurrently. Transfer students for Math 104 must complete Math 114 or 115 before enrolling in Econ 101. All enrollment is through permission of the department.

The course assumes multivariate calculus, and a strong understanding of these mathematical tools is crucial to succeed in the course. To emphasize this point: if you are not comfortable with basic calculus, this course may not be appropriate for you.

### Grading

The final grade will depend on

- Homework (25 %)
- 3 In class midterms (worth 10%, 15% and 15% respectively of total grade)
- Final exam (40 %)

### **Recitation Sections**

These are used to go over problems in the review packet. The problems to be covered each week will be posted on CANVAS.

Recitation Sections:

201: Monday, 2-3pm

202: Monday, 12-1pm

203: Friday, 11-12pm

204: Friday, 2-3pm

205: Monday, 9-10am

206: Friday, 1-2pm

207: Monday, 3-4pm

208: Friday, 3-4pm

#### Exams

Midterm and final exam are *open book*. This means they will not be memory tests. Midterm and final exam attendance is mandatory. Students who miss a

<sup>\*</sup>no Monday recitations on 9/2 (Labor Day), 10/14 or 12/2

<sup>\*</sup>no Friday recitations on 8/30, 10/11 (Fall Break) or 11/27

midterm for an allowable reason must report their absence on the Course Absence Reporting (CAR) System.<sup>1</sup> There will be no make-up midterms; students who are excused from a midterm will see the weights on the remaining midterms and final adjusted upwards to account for the absence.

No assistance may be given or received during an exam.<sup>2</sup> Students are expected to abide by the Code of Academic Integrity in the completion of assignments, papers and exams.

#### Course Material

Required for the course is the following text: Jeffrey M. Perloff, *Microeconomics: Theory and Applications with Calculus*, 3rd Edition (on reserve at van Pelt). Blackboard will be used for posting of announcements, slides, homework assignments, homework solutions, additional handouts, and other important materials. You are responsible for regularly checking, downloading, and reading materials posted on the site, as they form an integral part of the class.

### Laptop Use

You may use your laptop in class. However, this is not a *carte blanche* to employ it to distract classmates by tracking your portfolio, instant messaging, tweeting, blogging, booking a flight or updating yourself on the whereabouts of Brangelina.

### Office Hours and Contact Info

The TA for your recitation section will hold two office hours of an hour duration. Check with them for the time and place. My office ours are Monday & Thursday 11 am-12 pm in McNeil 451.

# Assignments

Homework assignments to be submitted at the beginning of class on the due date. Submissions must follow the following format: the answer is clearly displayed **first**, demarcated, followed by a justification written in clear, concise english. Mangled telegrams and streams of consciousness should be avoided. Marks

<sup>&</sup>lt;sup>1</sup>http://economics.sas.upenn.edu/undergraduate-program/course-information/guidelines/policies has a list of valid excuses for missing an exam.

<sup>&</sup>lt;sup>2</sup>The Economics Department Course Policies, which include rules about exam attendance, makeup exams, grading appeals, etc., are available at: http://economics.sas.upenn.edu/undergraduateprogram/course-information/guidelines/policies

are deducted for submissions that don't follow this format, are hard to read or incomprehensible. No late work will be accepted.

Write-ups must be your original work. You may not use materials containing solutions or partial solutions to the assignments (including solutions prepared by current or former students). If your analysis contains information from outside sources, then you must properly cite the sources.

While you are asked to complete the assignments individually, one does not wish to discourage encourage learning from one's peers. This leaves room for ambiguity, so I will try here to make expectations as clear as possible. In brief:

- 1. Discussing the general ideas behind the problems is permitted.
- 2. Writing formal solutions should be completely individual, done in the equivalent of separate rooms.

These guidelines leave a gray area as discussions of general ideas gradually become more specific. Some judgment calls are unavoidable, but here's the kind of interaction I have in mind: If a peer conveys an idea which seems to be central to the solution, do not write it down....immediately. Approach the problem again on your own as if afresh, influenced by however much of their idea you remember. If you can re-create it without notes, you have mastered it, and I'm happy to give you credit. In this way we can let everyone help each other learn, while steering a wide berth around simple copying.

# Course Outline

# Week 1: Introduction and Rational Buyer Model

Perloff Pg. 138-139

## Week 2: Monopoly Pricing & Elasticity & Midterm #1

Cahpter 1 from handout on CANVAS

Perloff Pg. 365-372

# Week 3: Monopoly Pricing & Costs

Chapter 1 & 2 from handout on CANVAS

Perloff Pg. 206-230

#### Week 4: Welfare & Price Dsicrimination

Perloff Pg. 140-143, 376-378. 396-401, 406-425

Chapter 3 from handout on CANVAS

### Week 5: Bundling & Versioning

Perloff Pg. 427-430

Chapter 3 from handout on CANVAS

### Week 6: Imperfect Competition: Introduction

Perloff Pg. 446-458

Chapter 4& 5 from handout on CANVAS

### Week 7: Midterm #2 & Midsemester Break

# Week 8: Imperfect Competition: Substitutes

Perloff Pg. 490-517

Chapter 4& 5 from handout on CANVAS

# Week 9: Imperfect Competition: Complements

# Week 10: Consumer Theory

Perloff Pg. 58-92

Chapter 6 from handout on CANVAS

# Week 11: Perfect Competition & Midterm #3

Perloff Pg. 101-118, 246-287

Chapter 7 from handout on CANVAS

# Week 12: Perfect Competition

Perloff Pg. 288-320, 325-359

Chapter 7 from handout on CANVAS

#### Week 13: Market Failure

Chapter 7& 8 from handout on CANVAS

#### Week 14: Adverse Selection

Perloff Chapter 18

Chapter 9 from handout on CANVAS

#### Week 15: Adverse Selection

Perloff Chapter 19

Chapter 9 from handout on CANVAS

#### Course Calendar

These dates are not fixed in stone. I reserve the right to change them to adjust to the pace of the class.

- Sept 4: Midterm #1 in class
- Sept 11: Homework 1 due
- Sept 18: Homework 2 due
- Sept 25: Homework 3 due
- Oct 2: Homework 4 due
- Oct 7: Midterm #2 in class
- Oct 9: No class, fall break
- Oct 23: Homework 5 due
- Oct 30: Homework 6 due
- Nov 6: Midterm #3 in class
- Nov 20: Homework #7 due
- Nov 27: No class (thanksgiving)
- Dec 4: Homework #8 due
- Dec 19: Final Exam 9 am-11 am