

# ECON 214: Introduction to Industrial Organization and the Economics of Anti-Trust

Section 1: 08/27/2013 - 12/09/2013

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Lecture: MW 2:30 PM - 3:50 PM Example Hall 216

Office Hours: M 4:00 PM - 5:00 PM Example Hall 021

W 10:30 AM - 11:20 AM

Industrial organization is the economics of business firms and how they compete. We will analyze the practices and strategies of firms in many different kinds of markets, with an emphasis on imperfectly competitive markets (which are most real markets). We will explore market inefficiencies, when firms profit from dead weight loss. And we will examine government programs designed to encourage efficient and productive markets. The goals of this course include:

- Understand business practices and strategies
- Understand why some firms and industries outperform others
- Appraise economic policies that affect how firms compete

## Prerequisites:

The subject matter requires that you have a knowledge of (at minimum) ECON 101 (Introduction to Economics). And it is recommended that you know of the material covered in ECON 301 (Intermediate Microeconomics) and ECON 219 (Game Theory). Intermediate Microeconomics goes more into depth into monopolies and perfect competition, the two basic markets that we will start with in this course and use as a reference. And Game Theory is the conceptual framework for understanding how firms interact with one another.

Hint: The preferred order is:

ECON 301(Intermediate Microeconomics) →ECON 219 (Game Theory) →This Course

## Requirements:

We will use “Industrial Organization: Theory and Practice,” by Don E. Waldman and Elizabeth J. Jensen, fourth edition. It is available at the college bookstore. You will not be required to bring the book to class.

It is recommended that you bring your textbook to review sessions for the exams (10/9 & 12/9).

Hint: A set of **colored** pencils is recommended, because we will be drawing a lot of complex graphs. It will make your notes more readable.

## Homeworks Assignments:

There are seven homework assignments, usually one for every two chapters. These are the main study tools for the exams. Part of the homework will be on Blackboard (usually multiple choice) and part will be additional assigned problems (usually from the book). These reflect the two types of questions you will see on the exams: (1) multiple choice on Blackboard and (2) an additional supplement of questions that you turn in. The questions on Blackboard will be graded automatically (with automatic feedback) and the additional assigned problems will not be graded, but you should do them anyway to study for the exams.

Solutions to the problems in the book will be available online the night before the assignment is due. You should first attempt each homework assignment individually. Then you should reference the solutions online, or ask a friend for help.

Hint: Take advantage of my office hours.

## Reading Quizzes:

There will be twenty-four reading quizzes (one for each lecture), which will all be posted on our Blackboard class site. Reading Quizzes are to keep you current with the assigned readings. These quizzes will be due before I lecture on the material to help you prepare for class, so if I say read Ch. 10 for Monday, then you should read Ch. 10 and complete its online quiz for Monday. You will have unlimited tries on each reading quiz and I will count only your highest score.

Note: The quizzes are relatively easy if you have read the material.

## Midterm and Final.

There is one midterm and one final. Both exams are take-home. Some of the questions will be online (usually multiple choice) and some you will have to turn in (similar to the problems at the end of each chapter). They are open notes, but you still should study. Because there is a time limit to the online section of the exams, you need to learn to do problems efficiently and quickly. If you are constantly referring to your notes and textbook to do the online section, you will not have enough time to finish all the problems.

Hint: Do not focus your studying on memorizing lecture notes and the textbook. Instead **focus on doing practice problems**. At least 80% of your time spent studying for an exam should be spent doing problems.

Note: This does not mean you should spend your time redoing homework problems. Redoing a problem is not the same as doing a new problem. There are plenty of additional problems from each chapter that are not assigned as homework problems.

## Method of Evaluation:

Homework Assignments (10%), Reading Quizzes (5%), Midterm (35%), and Final (50%).

The Final is given more weight, because (1) it is cumulative, and (2) you are still learning the material when you take the midterm.

## Grade Rubric:

Letter Grade	Min Grade	Max Grade
A+	100%	$\infty\%$
A	95%	99. $\bar{9}\%$
A-	90%	94. $\bar{9}\%$
B+	87%	89. $\bar{9}\%$
B	83%	86. $\bar{9}\%$
B-	80%	82. $\bar{9}\%$

Letter Grade	Min Grade	Max Grade
C+	77%	79. $\bar{9}\%$
C	73%	76. $\bar{9}\%$
C-	70%	72. $\bar{9}\%$
D+	67%	69. $\bar{9}\%$
D	63%	66. $\bar{9}\%$
D-	60%	62. $\bar{9}\%$
F	0%	59. $\bar{9}\%$

Note: Grades will not be curved or rounded for this course. This way there is no confusion on what grade you receive. The only extra credit will be tough questions in each exam, which can earn you up to an additional 10% of the exam's value. They are much harder and more time intensive than exam questions.

## A Note on Attendance:

While attendance is not graded, it is absolutely necessary to do well in this course. We cover a lot of material in a short amount of time. It is in your best interest to attend every lecture.

If you absolutely must miss a lecture or discussion section, you do not need any special permission. You should study a classmate's notes. Learning from someone else's notes is harder than attending a lecture. Regular class attendance is helpful in mastering the material. I encourage you to find a study buddy now to get notes from if you get sick.

It is far better to get notes from a friend than from your instructor. My notes are in an indecipherable short-hand that you need a PhD in economics to understand!

## **Email Policy:**

I encourage you to bring problems and questions to me in person during class or my office hours. That way I can make sure you understand the answer, instead of hope you understand my email. If you want to meet and cannot make a specific office hour, email me before-hand and I will set up an individual meeting (usually within a couple of days). I will also use email to make general class announcements.

Note: If you have a schedule conflict with my office hours, let me know soon as regular participation in my office hours can be very helpful to learning.

## **Extra Help:**

Do not hesitate to come to our office hours or by appointment to discuss a homework problem or any aspect of the course. If you want to hire an outsider tutor (for a fee), you can find a list of such people through the econ department.

## **Students with Disabilities:**

If you have a documented disability and need special accommodations, please see me as soon as possible. I will handle special accommodations as discretely as possible.

Do not wait until the exams. Advanced planning will help you in your studies.

## Tentative Course Outline:

This is an outline of the course. We meet on Mondays and Wednesdays. All the material in this outline is necessary to introduce you to Industrial Organization. If we get behind, we may have to have a Friday lecture to catch-up.

### 1. Introduction to the Firm

- Date: 8/28, 9/2, 9/4
- Readings: Syllabus, Ch. 1, Ch. 2
- Wednesday 8/28
  - Before Class: Introduction Letter
  - Lecture: Introduction
- Monday 9/2
  - Before Class:
    - \* Read: Ch. 1, 2.1-2.5.2
    - \* Due: Quiz # 1
  - Lecture: Profit Maximization and Short-Run Costs
- Wednesday 9/4
  - Before Class:
    - \* Read: 2.53 - 2.6
    - \* Due: Quiz # 2
  - Lecture: Long-Run Costs and Returns to Scale

Hint: The best ways to avoid getting behind is to: (1) come to class, (2) do your assignments and (3) ask questions and participate in class.

These letters will help you figure out what you want in the course and will help me address your concerns about the course.

These daily quizzes are meant to check to see if you are doing the reading. They should be easy, but not so easy you can get away without reading the text.

## 2. Introduction to Markets

- Dates: 9/9, 9/11, 9/16, 9/18, 9/23
- Readings: Ch. 3, Ch. 4
- Monday 9/9
  - Before Class:
    - \* Read: 3.1 - 3.2
    - \* Due:
      - Homework # 1
      - Quiz # 3
  - Lecture: Perfect Competition and Welfare Economics
- Wednesday 9/11
  - Before Class:
    - \* Read: 3.3 - 3.5
    - \* Due: Quiz # 4
  - Lecture: Monopoly
- Monday 9/16
  - Before Class:
    - \* Read: 3.6
    - \* Due: Quiz # 5
  - Lecture: Anti-Trust Policy Toward Monopolies
- Wednesday 9/18
  - Before Class:
    - \* Read: 4.1 and 4.3
    - \* Due: Quiz # 6
  - Lecture: Market Structure and Mergers

Each homework covers the material of the preceding topic. The online portion is graded automatically on Blackboard. The additional questions are not graded, but are necessary for understanding the material and doing well in the course.

Hint: If you need more practice, there are tons of additional problems in the book.

Note: We will be doing 4.2 on Monday. I teach the topics in a different order than presented in the book. Feel free to read 4.2 ahead of time.

- Monday 9/23
  - Before Class:
    - \* Read: 4.2
    - \* Due: Quiz # 7
  - Lecture: Entry, Exit, and Deterrence

### 3. Monopoly Practices and Network Effects

- Dates: 9/25, 9/30, 10/2, 10/7
- Readings:
  - Ch. 5
  - (1) Economides “Competition Policy in Network Industries,”
  - (2) Cabral “Networks and Standards,”
  - (3) Rysman “Two-Sided Markets”

We are doing additional readings in topics to cover recent changes in the economics literature.

- Wednesday 9/25
  - Before Class:
    - \* Read: 5.1-5.2
    - \* Due: Quiz # 8
  - Lecture: Dominant-Firm and Contestable Markets

- Monday 9/30
  - Before Class:
    - \* Read: 5.3, (1)
    - \* Due:
      - Homework # 2
      - Quiz # 9

This means: “Competition Policy in Network Industries.” by Economides

Always check the syllabus to see when an assignment is due.

– Lecture: Network Effects

• Wednesday 10/2

– Before Class:

\* Read: (2)

\* Due: Quiz # 10

– Lecture: Network Effects and Standards

• Monday 10/7

– Before Class:

\* Read: (3)

\* Due: Quiz # 11

– Lecture: Two-Sided Markets

This is important to recent industry, because there are a lot of two-sided online markets like Google, Amazon, and Facebook.

## Midterm

• Available: 10/9(4PM) - 10/18(11:59PM)

• Cover: Ch. 1 - 5, (1), (2), and (3)

• Wednesday 10/9

– Before Class:

\* Due: Homework # 3

\* Prepare Questions for Class!!

– Class: Review for Midterm!

– After Class: Midterm Becomes Available

This reading is a bit dense, but is a very important part of the recent Industrial Organization literature.

I will not prepare a lecture. Instead you should prepare questions. Good questions for us to go over would be problems from the end of the chapters.

• Friday 10/18

– ★ Midterm Due by 11:59PM ★

Hint: Do not focus your studying on memorizing lecture notes and the textbook. Instead focus on doing practice problems. There are plenty of additional problems at the end of each chapter that I did not assign for homework.

## 4. Game Theory and Oligopolies

- Dates: 10/14, 10/16, 10/23, 10/28
- Readings: Ch. 7, Ch. 8
- Monday 10/14
  - Before Class:
    - \* Read: 7.1 - 7.4
    - \* Due: Quiz # 12
  - Lecture: Introduction to Game Theory
- Wednesday 10/16
  - Before Class:
    - \* Read: 7.5 - 7.6
    - \* Due: Quiz # 13
  - Lecture: Mixed Strategies and Sequential Games
- Monday 10/21 – No Class
- Wednesday 10/23
  - Before Class:
    - \* Read: 8.1-8.2
    - \* Due: Quiz # 14
  - Lecture: Cournot and Stackelberg Oligopolies
- Monday 10/28
  - Before Class:
    - \* Read: 8.3
    - \* Due: Quiz # 15
  - Lecture: Bertrand Oligopolies and Heterogeneous Goods

Game theory is at the heart of all modern economics, especially Industrial Organization.

In this section, we will focus on a lot more practice problems to build a mathematical background that we will need for the rest of the course.

Take a much deserved break.

These are the most classic examples of Game Theory in economics.

## 5. Monopoly and Oligopoly Behavior

- Dates: 10/30, 11/4, 11/6
- Readings: Ch. 9, Ch. 11, Ch. 12
- Wednesday 10/30
  - Before Class:
    - \* Read: Ch. 9
    - \* Due: Quiz # 16
  - Lecture: Collusion
- Monday 11/4
  - Before Class:
    - \* Read: Ch. 11
    - \* Homework # 4
    - \* Quiz # 17
  - Lecture: Pricing Strategies to Deter Entry
- Wednesday 11/6
  - Before Class:
    - \* Read: Ch. 12
    - \* Due: Quiz # 18
  - Lecture: Non-Pricing Strategies to Deter Entry

The amount of time reading doesn't always match with the amount of time spent on the material in lecture. If we don't cover something in lecture, you are still responsible to know it for the exam. That said, I give more weight to material we spend more time on.

## 6. Product Differentiation

- Dates: 11/11, 11/13, 11/18
- Readings: Ch. 13
- Monday 11/11

- Before Class:
  - \* Read: 13.1-3
  - \* Homework # 5
  - \* Quiz # 19
- Lecture: Horizontal Product Differentiation
- Wednesday 11/13
  - Before Class:
    - \* Read: 13.4
    - \* Due: Quiz # 20
  - Lecture: Monopolistic Competition
- Monday 11/18
  - Before Class:
    - \* Read: 13.5
    - \* Due: Quiz # 21
  - Lecture: Product Differentiation with Asymmetric Information

## 7. Price Discrimination and Vertical Relationships

- Dates: 11/20, 12/2, 12/4
- Readings:
  - Ch. 16
  - (1) Ramachandran and Marr “Bundling TV Channels”,
  - (2) Nalebuff and Majerus “Bundling, Tying, and Portfolio Effects”
- Wednesday 11/20

Information is very important in the recent literature on Industrial Organization. Classic economics assumes that everyone knows everything, which is untrue.

Last Section!!!

- Before Class:
  - \* Read: 16.1
  - \* Homework # 6
  - \* Quiz # 22
- Lecture: Horizontal Product Differentiation
- Monday 11/25 – Tentatively No Class
 

If we don't fall behind in the material.
- Wednesday 11/27 – No Class for Thanksgiving
 

Eat Some Turkey.
- Monday 12/2
  - Before Class:
    - \* Read: 16.2-3, (4), (5)
    - \* Due: Quiz # 23
  - Lecture: Two-Part Tariffs, Tying, and Bundling
- Wednesday 12/4
  - Before Class:
    - \* Read: Ch. 17
    - \* Due: Quiz # 24
  - Lecture: Vertical Integration and Vertical Relationships

## Final Exam

- Available: 12/9(4PM) - 12/13(5PM)
- Covers: Everything with about 2/3rds the questions on the new stuff
- Monday 12/9
  - Before Class:

