

CARNEGIE MELLON UNIVERSITY

95-710 - ECONOMIC ANALYSIS

Summer 2021

Distance Instructor: Max Rubinstein (ssharma3@andrew.cmu.edu)

Lecturer on Videos: Prof. Alessandro Acquisti

Teaching Assistant: Saharsh Agarwal (saharsha@andrew.cmu.edu)

Office Hours: TBD

1. COURSE MATERIAL

Textbooks:

Pindyck and Rubinfeld, Microeconomics, 7th edition

Varian, Intermediate Microeconomics, A Modern Approach, 8th edition

These two books are excellent references for intermediate level microeconomics. Besides the course videos and posted slides, other readings will be suggested from these two books. You do not need to obtain both books, any one of them should be adequate. You can find both books on Amazon.com.

Previous (but recent) editions contain very similar materials and they should be sufficient for this course. However, as all the posted reading suggestions will be from the editions indicated above, if you decide to purchase a different edition, you will be responsible to locate the corresponding sections.

Lecture videos:

Links to the lecture videos can be found on Canvas and in this syllabus (Section 7). The link gives you access to recorded videos from Prof. Alessandro Acquisti. You are required to watch the lecture videos and go through the lecture notes on a weekly basis.

Lecture slides are available in PPT format on Canvas. Please note that the lecture slides may be slightly different from those that appear along with the videos but the main content is the same (in most of the cases differences are just stylistic).

A detailed schedule is provided at the end of this syllabus. Although our course will closely follow the videos, our distance schedule and coverage might be slightly different. Whenever such differences occur, follow **this syllabus** and the **information on Canvas** instead of the videos.

Additional Materials: Other readings and notes might be posted on Canvas at the instructor's discretion.

2. COURSE DESCRIPTION

This is a course in microeconomics and its implications for management and strategy.

Microeconomics as discussed in this course focuses on the models and methods by which managers can analyze their market and organizational environment to make optimal decisions. The key to such optimal decision-making is an understanding of the trade-offs in allocating scarce resources. The core models of microeconomics are fundamental to more applied areas of management such as strategy, marketing, production, and finance.

The course will begin with an examination of the underlying structure and models of competitive markets and the efficiency and welfare implications of those models. We will then examine economic models that describe firm output, pricing and entry/exit decisions. These models will then be applied to a variety of market contexts, including monopoly, oligopoly, and competition. We will also examine interesting dynamics between information, agents and economic outcomes in the context of game theory.

3. OBJECTIVES

The main objective of this course is to provide a level of economic “literacy” adequate to understand and apply crucial economic concepts to areas as diverse as management decision making and finance; marketing and strategy; policy making and social analysis.

4. GRADING, HOMEWORKS AND QUIZZES

There are two components of your grade. There will be **three homework assignments** and **two quizzes**. The weighting of these components is:

a) Homework	45% (15% each)
b) Quizzes	55% (25% + 30%)

Homework assignments may consist of numerical problems and open-ended questions (e.g., short essays or analysis questions). You will have to submit your homework assignments through Canvas, in an MS Word or pdf format.

The three homework assignments will be all made available during the first week of class along with their submission deadlines. This gives you a lot of time to plan your schedule and make sure to submit your homework on time. This also implies that extensions of submission deadlines WILL NOT be allowed.

For example, if you know that you will be traveling for work during a week when one of the homework assignments is due, please plan ahead of time and complete your homework on time.

The only cases in which extensions may be allowed include medical emergencies and similar, that will need to be confirmed by submitting an appropriate medical certificate to the instructor.

Please carefully check the schedule of the HWs in the latter part of this document. You can always submit your homework before the scheduled deadline (but NOT after).

There will be *two quizzes*: a midway course quiz (2 hours long) and a final quiz (3 hours long). Quizzes will be completed electronically through Canvas. You will need to have an Internet connection to complete your quizzes. You will enter your final answers directly in Canvas. Nevertheless, I strongly suggest you to write down all your calculations on a piece of paper while completing the quiz electronically. At the end of each quiz, you will be prompted to submit a picture (or any other electronic format) of your calculations through Canvas.

Usually, a quiz will be made available on a Friday morning and you will have until about the Sunday afternoon to take it. In other words, you can choose a convenient time for you to take the quiz from Friday to Sunday.

Note that the moment you start the quiz, you will have to complete it within the allotted time (so, 2 hours for the first and 3 hours for the final Quiz).

The scheduled dates and times for the two quizzes are in the course schedule at the end of this syllabus. Please look at them carefully.

Final Grades Policy

Heinz College recommends the mean grade for core Heinz classes (such as Economic Analysis) to be between 3.33 – 3.42. At the same time, a given class of students in any given year may perform differently from other classes in previous years and should be graded fairly and according to their own merits (or demerits). It is at the discretion of the instructor to decide when such situations occur. In addition, please note that your grade will be assigned on a curve: therefore, your final grade will depend on the average performance of the class.

5. COLLABORATION

Any homework should be done and submitted individually, although students are encouraged to discuss and collaborate among themselves. Discussions chats can be opened anytime on Canvas by the Instructor / TA, and students are free to discuss ideas, topics and other relevant questions about the material or the homework. Solutions to the homework, however, should be written individually and not shared to other students.

When submitting an assignment (homework or calculation sheet from the quizzes), please put your name (or Andrew ID) on the submission, naming your file accordingly: **Homework_#_andrewid**).

The **take-home quizzes they are strictly closed book** and you are absolutely **NOT allowed to collaborate with your classmates** or with any other people outside the class. Moreover, you are **NOT** allowed to use your book/notes during the quiz.

Plagiarism and/or copying of another group's homework or another student's exams, or from previous years' homework and exams, or from your books/notes are university offenses. Just *don't* do it. Please. It's not worth it. These rules and the academic integrity standards outlined in your student handbook will be strictly enforced. Any violation of these rules or standards is considered a fundamental breach of trust and will result in failure of the course.

6. COMMUNICATION

The best way of communication between us will be through e-mail and the Discussions forum on Canvas. If you need to talk to me over phone/Skype, please send an e-mail and I will try my best to accommodate. Similarly, you can

schedule an online meeting with the TAs. We'll also provide Zoom IDs for office hours on Canvas.

7. COURSE SCHEDULE

Link to lectures videos:

<https://heinzcollege.mediasite.com/Mediasite/Channel/95-710z6-economic-analysis-copyright-2020-carnegie-mellon-university>

Lecture videos are downloadable for your convenience. Students that will be travelling and/or will have limited access to the Internet are invited to download the videos ahead of time. Please let us know if you have any issue accessing or downloading the videos.

Week 1 (July 5th) – Basics of Supply & Demand; Markets & Efficiency; Math Review

Lecture Videos:

[08/26 Lecture](#): all

[08/28 Lecture](#): all

[09/04 Lecture](#): all

Readings:

Corresponding sections from the textbook by Varian (8th ed): Chapters 1, 15.1-15.10, and 16.1-16.5

Corresponding sections from the textbook by Pindyck and Rubinfeld (7th ed): Chapters 2.1-2.6 and 4.1-4.4

In addition, please make sure to **refresh some math concepts** that we will be using during the course by reading the Mathematical Appendix at the end of Varian's book. A pdf copy is also available on Canvas (folder Week 1 material). We will be working with functions (in most cases, linear functions) and you may be need to take derivatives or compute the minimum/maximum of a function.

Week 2 (July 12th) – Firm Costs and Perfect Competition

Lectures Videos:

[09/09 Lecture](#): all

[09/11 Lecture](#): all

[09/16 Lecture](#): up to 10:00

Readings:

Corresponding sections from the textbook by Varian: Chapters 21, 22, 23
Corresponding sections from the textbook by Pindyck and Rubinfeld (7th ed):
7.1-7.4 and chapter 8.

Homework #1 due Friday, July 16th by 1:00pm EST

Week 3 (July 19th) – Monopoly, Monopolistic Competition; Pricing and IT Costs.**Lectures Videos:**

[09/16 Lecture](#): from 10:00

[09/18 Lecture](#): all

[09/23 Lecture](#): up to 44:00

Readings:

Corresponding sections from the textbook by Varian: Chapters 24, 25.7-25.10;
Chapter 25.1-25.6

Corresponding sections from the textbook by Pindyck and Rubinfeld (7th ed):
Chapters 10.1-10.4 (Monopoly); 12.1(Monopolistic Competition); 11.1, 11.2; 11.5
(Pricing).

Week 4 (July 26nd) – Game Theory and Oligopoly**Lectures Videos:**

[09/23 Lecture](#): from 44:00

[09/25 Lecture](#): all

[09/30 Lecture](#): all

[10/02 Lecture](#): up to 27:00

Readings:

Corresponding sections from the textbook by Varian: Chapters 27, 28
Corresponding sections from the textbook by Pindyck and Rubinfeld (7th ed):
13.1-13.6 (Game Theory); 12.2-12.5 (Oligopoly).

Homework #2 due Friday, July 30th by 1:00pm EST

******QUIZ 1 will be available from Friday, July 30th until Sunday, August 1st 4pm EST******

Week 5 (August 2nd) – Collusion and Strategic Behavior; Asymmetric Information

Lectures videos:

[10/02 Lecture](#): from to 27:00

[10/04 Lecture](#): all

[10/07 Lecture](#): up to 18:00

Readings:

Corresponding section from the textbook by Varian: Chapters 28; 29.3; 37

Corresponding section from the textbook by Pindyck and Rubinfeld (7th ed):
12.6; 13.7; 17.1 – 17.4.

Readings on Canvas:

Rapid Price Communication;

Dupont and Computers

Week 6 (August 9th) – Behavioral Economics; Lock-in and Switching Costs; Networks Effects, Externalities.

Lectures Videos:

[10/07 Lecture](#): from 18:00

[10/09 Lecture](#): all

[10/14 Lecture](#): all

Readings:

Corresponding sections from the textbook by Varian: Chapter 30; 35.1- 35.7.

(Pindyck and Rubinfeld do not treat those topics; I have posted a copy of the Varian's chapters on Canvas, please read those.)

Homework #3 due Thursday, August 12th by 11:59pm EST

******QUIZ 2 will be available from Friday, August 13th until Sunday, August 15th 12 noon EST. ******

SUMMARY of SUBMISSION DEADLINES

Homework #1 due Friday, July 16th by 1:00pm EST

Homework #2 due Friday, July 30th by 1:00pm EST

Homework #3 due Thursday, August 12th by 11:59pm EST

QUIZ 1 will be available from Friday, July 30th until Sunday, August 1st, 4pm EST.

You will have 2 hours to complete it.

*QUIZ 2 will be available from Friday, August 13th until Sunday, August 15th, 12 noon EST. **You will have 3 hours to complete it.***