

CARNEGIE MELLON UNIVERSITY
MASTER OF INFORMATION SYSTEMS MANAGEMENT

95-710 - ECONOMIC ANALYSIS

Fall 2003 – Mini 1

Monday and Wednesday 2-3:20 (Review sessions on Friday), HBH 1000

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Office Hours: Friday 10-12 or by appointment

TAs:

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TEXTBOOKS

Required: Shapiro and Varian, Information Rules.

Recommended: Varian, Intermediate Microeconomics.

Course Packet: Assorted

COURSE DESCRIPTION

This is a course in microeconomics and its implications for management and strategy – particularly but not exclusively in the context of information technology firms. 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 important efficiency and welfare implications of those models. We will then examine with some specificity economic models that describe firm output, pricing and entry/exit decisions. This model will then be applied to a variety of market contexts including monopoly, oligopoly and competition. As we go through this analysis, we will seek to understand the implications of the theory for information technology firms and industries specifically. We will also examine interesting dynamics between information, agents and economic outcomes in the context of game theory. The Shapiro and Varian text is an excellent source of structured examples in this effort. Hence, most of our discussions of the economic models will be accompanied by explorations of the ideas and examples presented in that text.

GRADING

Grading for this class is based on a curve established by the Dean of the Heinz School who chairs the MISM Steering Committee. The mean (average) grade for this class will be between 3.33 (B+) and 3.67 (A-). Grades will be approximately normally distributed around that mean.

There are two components of your grade. The weighting of these components is:

1. Homework/Problem Sets 40%
2. Quizzes 60%

There will be three homework assignments and three quizzes. Each homework will be distributed in a Thursday class and will be due the following Friday at the beginning of the weekly review session. You must turn in each of the homework assignments on time or receive a zero.

There will also be three quizzes. Quizzes will be administered during the Friday review session. Thus, review session is mandatory on the days when quizzes are given. However, the lowest quiz score will be dropped in calculating your final grade. If you miss one quiz for any reason (interview, illness, hangover, whatever), that is the grade that will be dropped.

I encourage all students to consider that grades are effectively useless to you at this point in your professional life (other than achieving the threshold level required to assure your graduation). It is my experience that focusing on grades interferes with actual learning. You may request that the grading of an assignment be reviewed by submitting your original assignment with a *written* explanation of why you think the grade was in error.

COLLABORATION

The homework will consist of numerical problems and essay/analysis questions and is due in class on the date indicated. Students are permitted to collaborate on the homework in groups of up to three. (You will learn more if you do the homework by yourself.) Please submit just one copy of the homework per group. Plagiarism and/or copying of another group's homework is a university offense.

Quizzes will be in-class and closed book.

In general, 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 acceptable professional conduct and will result in *failure of the course*. No exceptions.

COURSE SCHEDULE AND TOPICS

Readings listed below should be completed *prior to* the class for which they are listed. Readings other than Shapiro and Varian are contained in the course packet.

Lecture 1

Topic: Introduction
Today's Reading: None

Lecture 2

Topic: Markets and Efficiency
Today's Readings: Shapiro and Varian, Chapter 1

No Class on Labor Day

Lecture 3

Topics: Monopoly and Pricing
Today's Readings: Shapiro and Varian, Chapters 2 and 3
: Varian Chapter 24

Review Session 1

Topic: Review Session
Assignment Due: Homework 1

Lecture 4

Topic: Firm Costs
Today's Readings: Varian Chapter 21

Lecture 5

Topic: Monopolistic Competition and Pure Competition
Today's Readings: Monopolistic Competition - Varian Chapter 25.7-25.9
Pure Competition – Varian Chapter 22

Review Session 2

Topic: Review Session
Assignment: Quiz 1 (Lectures 1-4)

Lecture 6

Topic: Game Theory
Today's Readings: Varian Chapter 28

Lecture 7

Topic: Oligopoly
Today's Readings: Varian Chapter 27

Review Session 3

Topic: Review Session

Assignment Due: Homework 2

Lecture 8

Topic: Collusion
Today's Readings: *Ethyl and Rapid Price Communication*

Lecture 9

Topic: Strategic Behavior
Today's Reading: *Dupont and Microsoft* readings

Review Session 4

Assignment: Quiz 2

Lecture 10

Topic: Lock-in and Switching Costs
Today's Readings: Shapiro and Varian, Chapters 5 and 6 and
<http://www.inforules.com/models/m-switch.pdf>

Lecture 11

Topic: Networks and Positive Feedback
Today's Reading: Shapiro and Varian Chapter 7 and
<http://www.inforules.com/models/m-net.pdf>

Review Session 5

Topic: Review Session
Assignment Due: Homework 3

Lecture 12

Topic: Cooperation, Compatibility, and Waging a Standards War
Today's Reading: Shapiro and Varian Chapters 8 and 9

Lecture 13

Topic: Uncertainty or Asymmetric Information
Today's Readings: To Be Announced

Review Session 6

Assignment: Quiz 3