Overview

15.010/011/0111 is Sloan’s core subject in microeconomics. Economics provides a framework to understand how businesses create value, capture value, as well as how they compete and cooperate with one another. The basic framework studies what happens if firms maximize profits: this provides a guide for what decisions can improve profits, and predicts the behavior of a firm’s suppliers, consumers in business-to-business transactions, and competitors. We start by considering situations where firms are insulated from the strategies of other firms (e.g. competitive markets), we then consider how firms price when they have market power, and then we introduce game theory to consider the strategic interactions between and within firms.

The assigned readings in this course have been selected to provide a balance of principles, tools, and applications; they are detailed in the syllabus below. They provide valuable background reading, especially for those who have less experience with economics courses.

The main textbook for the course is Bernheim and Whinston’s Microeconomics, 2nd edition (referred to as BW below). We created an electronic and softcover version of Bernheim and Whinston with selected chapters. The hardcopy is available at the MIT Coop. The electronic version may also be ordered at the MIT Coop or by going to https://create.mheducation.com/shop/ and entering into the search box the ISBN: 97813088864549. The title of the e-book is Economic Analysis for Business Decisions.
We also have a digital course pack with selected readings found at study.net. This provides additional textbook readings from from Pindyck and Rubinfeld’s Microeconomics (referred to as PR below) along with other readings.

A key feature of the course is the discussion of current events and real-world examples in class. You will find newspaper article readings assigned for each lecture, and they can be found on stellar along with discussion questions.

**A note on the use of calculus**

The use of calculus in nearly all business settings is a non-starter. As a result, the course will develop fundamental economic principles using real-world examples and current events rather than calculus problems. We also understand that some students benefit from thinking through the concepts with calculus, so we will describe some results using calculus as an additional way of thinking through a problem. Problem set and exam questions and solutions, however, will not require the use of calculus.

Grading will be based on the exams, problem sets, and classroom participation according to the following weights:

<table>
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<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Classroom participation</td>
<td>20 percent</td>
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<tr>
<td>Problem sets</td>
<td>10 percent</td>
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<tr>
<td>Midterm exam</td>
<td>30 percent</td>
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<tr>
<td>Final exam</td>
<td>40 percent</td>
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The coursework for 15.0111, the undergraduate course number that “meets with” 15.011, is the same. We recognize that undergraduate students have less experience compared to graduate students, and their class participation will be graded relative to other students in 15.0111.

**Key Dates Include:**

- **Problem Set #1:** Tuesday, September 20
- **Problem Set #2:** Monday, September 26 (Group Assignment)
- **Problem Set #3:** Friday, October 7
- **Midterm:** Thursday, October 20
- **Problem Set #4:** Tuesday, November 15
- **Problem Set #5:** Friday, December 9
- **Final Exam:** Wednesday, December 21

**Policy on Classroom Behavior**

- Students are expected to attend all classes, arrive promptly on time, and stay for the entire class. Email your TA for excused absences due to illness or religious observance.

- Faculty members are expected to begin and end class on time.

- Laptops, e-readers, and cell phones may not be used or permitted to make noise in the classroom except on occasions when we use them for simulations in class.
POLICY ON PROBLEM SETS AND EXAMINATIONS

1. Problem sets are designed to help you learn how to apply the material presented in lectures and recitations. You are encouraged to discuss course material, including problem sets, with other students in the class. While problem sets will be evaluated for feedback purposes, the performance will not count toward your final grade. With respect to your final grade, you will earn full credit as long as a good-faith effort is made and the problem set is turned in on time. The purpose of this policy is to ensure that the work is a risk-free learning opportunity, and to signal our very strong belief that completing the problem sets on your own is an essential part of the learning experience for this class.

2. In fairness to students who complete assignments on time, late problem sets will not be accepted for credit. You may turn in solutions after class on the day they are due. In addition, solutions may be placed in designated boxes that will be set out on the 5th floor of E62. These boxes will be emptied at 4:30 p.m. and their contents placed in sealed envelopes for delivery to the TAs. Please note that assignments left anywhere other than the boxes may be discarded. For solutions, please remember: if we cannot read it, we cannot provide feedback.

3. Examinations: We do not want exams to be a memorization exercise, so we allow students to bring an 8.5x11 inch sheet of paper with notes: one-sided for the midterm and both sides for the final exam. During exams, you may consult the proctor administering the exam if you need clarification of exam questions. No discussion or other form of communication with anyone else will be permitted after the exams have been distributed. If your calculator has memory to save information, you need to clear it before the exam. Students found to have cheated or engaged in any other unethical behavior will be given a grade of F on the examinations involved and will be turned over to the appropriate disciplinary committees within MIT for further action. If applicable, students in one section should not discuss an exam until students in all sections have completed the exam. Students arriving late will not be given extra time. In fairness to other students, make-up examinations are only considered for emergency health problems and religious holidays.

4. Re-grade Policy. Requests for re-grading an exam must be made within one week of the date upon which the graded examination is returned to the student. To request a re-grade, attach a written explanation of the potential problem with the grading and submit it to your TA. Re-grading may not be limited to the part of the exam which is discussed in the written explanation. Re-grades will be carried out by the 15.010/011/0111 teaching faculty.

If you have any questions about these policies, please raise them with one of the faculty members or teaching assistants.
STUDENT SUPPORT SERVICES

If you are dealing with a personal or medical issue that is impacting your ability to attend class, complete work, or take an exam, please discuss this with Student Support Services (S3). The deans in S3 will verify your situation, and then discuss with you how to address the missed work. Students will not be excused from coursework without verification from Student Support Services. You may consult with Student Support Services by visiting them in Building 5 Room 104 or phoning them at 617-253-4861.

STUDENT DISABILITY SERVICES

MIT is committed to the principle of equal access. Students who need disability accommodations are encouraged to speak with Kathleen Monagle, Associate Dean, prior to or early in the semester so that accommodation requests can be evaluated and addressed in a timely fashion. Even if you are not planning to use accommodations, it is recommended that you meet with SDS staff to familiarize yourself with the services and resources of the office. You may also consult with Student Disability Services in Building 5 Room 104 or at 617-253-1674. If you have already been approved for accommodations, please contact your professor early in the semester so that we can work together to get your accommodation logistics in place.
COURSE OUTLINE

Part I: Competition & Monopoly

Sept 8  Thurs  Supply & Demand: Basics (1/2)
Read: B&W: Section 2.1, 2.2, 2.3, 2.4 (p42-48)
“How Sears uses Big Data to Get a Handle on Pricing”

Sept 9  Fri  Recitation

Sept 13  Tues  Supply & Demand: Basics (2/2)
Read: B&W: Section 14.1-14.5
“In Praise of Efficient Price Gouging (Uber)”
“Who Pays for Your Coffee” from The Undercover Economist

Sept 15  Thurs  Maximizing Benefits minus Costs
Read: B&W: 3.1-3.3, 8.1-8.2, 8.4, 8.7, 9.1-9.3 (up to p293)
“Salem Telephone Co.”
“Air France to Release Drastic Cost-Cutting Plan

Sept 16  Fri  Recitation

Sept 20  Tues  Supply & Demand: Advanced Topics
“High Cost of Raw Materials”
“Oil’s Plunge Could Help Send Its Price Back Up”

Due: Problem Set 1

Sept 22  Thurs  Application: Externalities
Read: B&W: 20.1-20.2 (up to p729); p737-738.
“Saving the Planet” from Nudge

Sept 23  Fri  No Recitation (Student Holiday)

Sept 26  Mon  Due: Problem Set 2, Group Assignment

Sept 27  Tues  Application: International Investment Decision
Read: Alusaf Case
P&R: 7.2, 8.4

Sept 29  Thurs  Monopoly I: Introduction
Read: B&W: Chapter 17 Introduction-17.3
“Competition is for Losers”
“Taking on the Drug Profiteers”

**Sep 30**  *Fri*  Recitation (New time: 2-4pm, After Team Day)

**Oct 4**  *Tues*  Monopoly II: Market Segmentation
Read: B&W: 18.1-18.3
“ Websites Vary Price, Deals Based on Users’ Information”
“Using Big Data to Make Better Pricing Decisions”

**Oct 6**  *Thurs*  Monopoly III: Sources of Market Power
Read: Case Reading: Microsoft Search
Thompson 2012: Reading on “Learning by Doing”

**Oct 7**  *Fri*  Recitation
Due: Problem Set 3

**Oct 11**  *Tues*  No Class: Holiday

**Oct 13**  *Thurs*  No Class: Accounting Midterm

**Oct 14**  *Fri*  REVIEW SESSION: All Students 12-1:30pm

**Oct 18**  *Tues*  Monopoly IV: Value in Supply Chains (& Mid-course Lessons)
Read: P&R: Appendix to Chapter 11: Double Marginalization (p 439-442)
“A Big Player in the Toy Market”

**Oct 20**  *Thurs*  MIDTERM EXAMINATION AT 8:35-9:55 (all 15.010 Sections)

**Oct 21**  *Fri*  No Recitation

**Oct 24-Oct 28**  SLOAN INNOVATION PERIOD:
World Trade; Income and Happiness
Part II: Economics of Strategic Behavior

Nov 1 Tues Game Theory and Oligopoly I: An Introduction
Read: B&W: 12.1-12.3, 19.1
“A Mad Scramble for Young Bankers”

Nov 3 Thurs Game Theory and Oligopoly II: Price Competition Simulation
Read: B&W: 19.2
Read, View & Play: Ventures in Salt, including video instructions:
https://mitsloan.mit.edu/LearningEdge/simulations/salt/Pages/default.aspx

Nov 4 Fri Recitation

Nov 8 Tues Game Theory and Oligopoly III: Repeated Price Competition & Product Differentiation
Read: B&W: 12.4 (p418-421), 19.5, 19.4 (except Worked-out Problem 19.2)
“Silicon Valley Tech Giants Struck Deals on Hiring”
“Low Cost Airlines Drop Upstart Image and Dress to Impress”

Nov 10 Thurs Game Theory and Oligopoly IV: Cournot (Quantity) Competition & Anti-Trust
Read: B&W: 19.3 (p666-670), 19.8
“Google Elbows into the Cloud”
“A Price War Erupts in Cloud Services”
Executive Summary of Anti-Trust Laws

Nov 11 Fri No Recitation: Holiday

Nov 15 Tues Game Theory and Oligopoly V: Dynamic Games and Strategy
Read: B&W: 19.7
“Amazon Bares Its Computers”
Due: Problem Set 4

Nov 17 Thurs Strategic Pricing I: Consumer Self-Selection
**Read:** B&W: 18.4, 21.1 (p752-3)

“Why Airlines Want to Make you Suffer”

“The Frequent Fliers Who Flew too Much”

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<tr>
<td><strong>Nov 18</strong></td>
<td>Fri</td>
<td>Recitation</td>
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<td><strong>Nov 22-25</strong></td>
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<td>No Class or Recitation: Thanksgiving Week</td>
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<td><strong>Nov 29</strong></td>
<td>Tues</td>
<td>Strategic Pricing II: Menu Pricing &amp; Bundling</td>
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<td>Read: B&amp;W: 18.5</td>
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<td>NY Times Paywall Handout</td>
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<td>“With Keurig 2.0, Green Mountain Wants Its Monopoly Back”</td>
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<td><strong>Dec 1</strong></td>
<td>Thurs</td>
<td>Economics of Negotiations</td>
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<td>Read: “Clearing Hurdles to Iran Nuclear Deal with Standoffs, Shouts, and Compromise”</td>
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<td><strong>Dec 2</strong></td>
<td>Fri</td>
<td>Recitation</td>
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<td><strong>Dec 6</strong></td>
<td>Tues</td>
<td>Incentive Contracts (&amp; Course Lessons)</td>
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<td>Read: B&amp;W: 21.4</td>
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<td>P&amp;R: 5.2, 17.4 (p645-649)</td>
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<td><em>Freakonomics</em> Introduction Excerpt</td>
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<td><strong>Dec 9</strong></td>
<td>Fri</td>
<td>Recitation REVIEW SESSION: All Students 12-1:30</td>
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<td>Due: Problem Set 5</td>
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<td><strong>Dec 21</strong></td>
<td>Wed</td>
<td>FINAL EXAMINATION (MIT Registrar confirms the date mid-semester)</td>
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