



BE 300: APPLIED MICROECONOMICS

Winter 2017
All Sections Meet Tuesdays & Thursdays

Instructors: Ach Adhvaryu
Room: R2240
Sections: Sec. 1 @ 8:30am

Kyle Handley
R2240
Sec. 2 @ 10:00am

J. Frank Li
R2240
Sec. 3 @ 1:00pm

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Office hours: Refer to your Section's Canvas site for professor office hours info and updates. Tutor/TA office hours schedules will also be posted on Canvas.

Check email daily for course updates and new materials. Read the syllabus carefully. You are responsible for knowing its contents. Mark the dates of all exams in your calendar.

Sections 1 and 3 ONLY (Professors Adhvaryu and Li):

Unless specifically announced for a particular class session, electronics (e.g., laptops, tablets, and smartphones) should not be used during class sessions. Use of electronics during class sessions will affect class participation grades.

Sections 2 ONLY (Professor Handley):

Laptops, tablets, and smartphones will be used in class sessions in conjunction with Learning Catalytics peer instruction software. Use of electronics for other purposes without prior approval will affect class participation grades. If you don't have a laptop, smartphone or tablet with working Wi-Fi, a loaner tablet will be provided for you during class time.

COURSE OBJECTIVE:

Applying fundamental microeconomic concepts to a wide range of managerial and strategic decisions in a business setting.

COURSE MATERIALS:

Required: **Sections 2 (Professor Handley) only:** Students are required to purchase a subscription to Learning Catalytics. Visit https://learningcatalytics.com/users/sign_up and purchase a 6-month subscription for \$12. This will be your only required, additional cost for this course.

All Sections: Other required materials, including cases, problem sets, readings, practice problems, and practice exams, will be posted on the course website (at canvas.umich.edu).

Optional: Jeffrey M. Perloff & James A. Brander, *Managerial Economics and Strategy* (Pearson 2014).

Avinash Dixit, *Microeconomics: A Very Short Introduction* (Oxford University Press, 2014) – available in eBook form from the library (required UM login)
https://mgetit.lib.umich.edu/link_router/index/4088065

COURSE REQUIREMENTS AND EVALUATION:

Class participation	10%	
Homework (problem sets & cases)	15%	
<u>Practice</u> Quiz 1 (in-class)	2.5%	(Th., February 9, during class)
Midterm*	30%	(Wed., Feb 22, 7:00 pm – 9:00 pm)
<u>Practice</u> Quiz 2 (in-class)	2.5%	(Tu., Apr. 11, during class)
Final Exam*	40%	(Th., Apr. 27, 10:30am – 12:30pm)

*See note below on midterm and final exam scoring.

The emphasis of this course is on applying economic concepts and principles to real world managerial problems. Although most concepts listed on the syllabus will be covered in class, every student will be responsible for understanding each of the listed economic concepts even if not specifically discussed in class, so that class time can be devoted principally to applying, rather than learning, the concepts. An important part of mastering the application of economic principles is the experience you will gain by setting up and solving problems contained in the cases and exercises. These are very important and are second only to class attendance and attention in developing your ability to apply the economic concepts in courses, as well as in your careers.

CLASS PARTICIPATION: Class participation is a function of attendance, contributions to in-class discussions (including questions and volunteering of answers), and attentiveness during class sessions (i.e., refraining from using electronic devices when not required for an in-class exercise). Submitting current news stories and/or articles relevant to the course material (and that are subsequently the basis for an in-class discussion) will also count as class participation; send suggested news articles/stories by email to your section instructor or grader. All students start the semester with a mean score (B+) for class participation, and your class participation grade will increase or decrease as a factor of the elements listed above.

NO texting, emailing, web surfing, chatting, watching videos, or gaming during class. This not only distracts you, but the others around you. The penalty for off task activity is zero participation points for that class, as if you were absent that day in body as well as mind.

ABSENCES: Each student can have two “wild card” absences without penalty; this allows for situations such as an internship interview that cannot be rescheduled, a family emergency, etc. Any absences beyond the two will result in a lower class participation grade, but may be “excused” (i.e., no penalty) if you submit a written explanation to your instructor before the class session.

HOMEWORK: Homework (i.e., case write-ups and problem sets) will be graded on a “check” (2 points)/“check-minus” (1 point) basis. **Homework will be submitted on-line via the Canvas site before your lecture begins (refer to Canvas for specific due dates and times).** Because we will often be covering topics and material for

the first time as we work through the cases in class, your written answers to the cases are not expected to be perfect. But they should reveal a level of thought and effort to understand and answer the questions.

READINGS: All readings (cases, news articles, etc.) other than textbook references listed on the syllabus are required. Relevant portions of the textbook noted on the syllabus are for your reference only. This class builds on material from the course prerequisite principles of microeconomics. Class time will be spent on discussion, solving business problems and examples, cases, and simulations. To get the most out of lectures it is required and expected that students will read related material before the date of the class session for which that material is listed.

Additional readings may be assigned during the semester when breaking news and current events are relevant to course material.

PRACTICE QUIZ: The primary purpose of the quiz is to give you some experience with the types of questions you will be asked on the midterm and final, and to alert you if you are falling behind in the course. This will be a timed multiple choice/short answer quiz. It is purely diagnostic and it will not be graded. *You will get full credit for the quiz just for taking it.* Note that the questions on the midterm and final may be harder than those on the practice quiz. Actual quizzes, midterms, and final exams from previous years are posted on the course website for your further review and practice.

MIDTERM & FINAL EXAMS: The midterm and final exams are cumulative—that is, you may be tested on all material up to that point in the course. **Please note the date and time of the exams carefully.** This is a core class; **no make-up exams will be given except for valid medical excuses.**

***The midterm and final exam are worth a combined 70 total points out of 100 for the class. Your total points for the midterm and final will be computed using a specific formula that will combine your midterm (MT) and final exam (Final) scores:**

$$\text{Total Points (out of 70)} = 30\% \times \max \{ \text{MT (\% pts)}, \text{Final (\% pts)} \} + 40\% \times \text{Final (\% points)}$$

This means that if you do very poorly on the midterm, you can redeem yourself by working hard and doing very well on the final exam. Alternatively, if you do very well on the midterm, you can keep that score and adjust your effort accordingly for the final exam. For example, if Student A scores 75% on the midterm and 90% on the final, her total combined points would be $30\% \times \max\{75, 90\} + 40\% \times 90 = (0.30 + 0.40) \times 90 = 63$. If Student B scores 95% on the midterm and only 90% on the final, his final points would be $30\% \times \max(95, 90) + 40\% \times 90 = 0.30 \times 95 + 0.4 \times 90 = 64.5$.

Accommodations for Students with Disability Statement: Students who require accommodation for a disability should let me know as soon as possible. Once aware of your needs, the Office of Services for Students with Disabilities will determine appropriate accommodations for your needs. Any information on disability you provide will be treated as private and confidential.

Academic Honor Code

Personal integrity and professionalism are fundamental values of the Ross School community. To help ensure that these values are upheld, this course will be conducted in strict conformity with the Academic Honor Code. The code and related procedures can be found at the following website:

<http://www.bus.umich.edu/Academics/Resources/communityvalues.htm>.

Ignorance of the code and related information appearing on the site will not excuse a violation.

BE 300 Rules regarding Student Collaboration

Students may work together on answering the cases but must (i) write up and submit their own answers in their own words, and (ii) provide the names of students with whom they worked.

Students may NOT collaborate on exams or the quiz.

COURSE OUTLINE & SYLLABUS

1. PRELIMINARIES

1. Course policies and overview
2. Intro to BE300

Textbook: Introduction: Ch. 1, Ch. 7.1 & 7.5

2. INDIVIDUAL AND MARKET DEMAND

1. Decision making on the margin
2. Consumer surplus
3. Demand estimation, elasticity, and revenue

Cases: “Electric Power Purchasing” (write-up)
“O2, Brute” (for class discussion only)
“Estimating the Demand for Tagamet” (write-up)

Readings: “In the Dark” (*Wall St. Journal*)
“Selected Estimates of Own-Price Elasticities”

Textbook: Demand and supply: Ch. 2.1 – 2.2
Consumer surplus: pp. 255–58
Elasticities: Ch. 3 intro & Ch. 3.1
Regression Analysis: Ch. 3.2 – 3.5

3. COSTS AND PROFIT MAXIMIZATION

1. Economic and accounting costs
2. Cost concepts:
 - a. Opportunity, avoidable, and sunk
 - b. Fixed and variable; total, average, and marginal
 - c. Short-run and long-run
3. Economies of scale and scope; learning curves
4. Capacity decisions (long-run horizon): Planned output
5. Operating decisions (short-run horizon): Production and price setting

Cases: “Franchisee McCosts” (for class discussion only)
“Moo’ve on Out? Should Households Still Own Cows and Buffalo?” (discussion)

Readings: “Cattle look good on gift cards, but look like poor investments” (Brittan, *FT.com*)

“Why Don’t Airlines Just Add More Flights at the Holidays?” (Phil LeBeau, *CNBC*)
“Outsource your way to success” (Rampell, *NYT Magazine*)
“How to Walk Away” (Halvorsen, *The Atlantic*)

Textbook: Costs: Ch. 5 intro, Ch. 6 intro & Ch. 6.1 – 6.3
Diminishing Marginal Returns pp. 132 – 133
Returns to scale: Ch. 5.4
Technological change: Ch. 5.5
Economies of Scale: pp. 176 – 179
Learning Curves & Economies of scope: Ch. 6.4 – 6.5
Profit maximization: Ch. 7.2

4. COMPETITIVE SUPPLY AND MARKET ANALYSIS

1. Price-taking, competitive short-run supply, and market equilibrium
2. Entry, competitive long-run supply, and long-run market equilibrium
3. Producer surplus (economic rents)
4. Efficiency, deadweight loss, and distributional analysis
5. Applications
 - (a) Tax incidence
 - (b) Import quotas and tariffs
6. Rent seeking and government policy

Cases: “U.S. Sugar Import Quotas” (write-up)

Readings: “Sugar’s Brave New World”, Dec 23, 2016 (John Abbink, *Frontera News*)

Textbook: Market equilibrium: Ch. 2 Intro & Ch. 2.3 – 2.4
Market Structure: Ch. 2.6 & 7.5
Competitive firms and markets: Ch. 8 intro & Ch. 8.1 – 8.3
Monopoly: Ch. 9 intro & Ch. 9.1 – 9.4
Efficiency / Economic Well-Being: Ch. 8.4
Government interventions: Ch. 2.5, pp. 265–268, Ch. 16 intro & Ch. 16.1
Quotas, tariffs, and rent seeking: Ch. 17.3

5. GLOBAL BUSINESSES AND THE FIRM

1. Transaction costs, “make vs. buy”, and vertical integration
2. Relationship-specific investments, opportunism, and credible commitments
3. Hold-up problems
4. Multinational firms and outsourcing

Readings: “The ‘WTO option’ for Brexit is far from straightforward”, (*The Economist*, Jan. 7, 2017)

Textbook: Vertical integration and transaction costs: Ch. 7.4
The hold-up problem: Ch. 13.5
Comparative advantage: Ch. 17 intro & Ch. 17.1
Multinational Firms and Outsourcing: Ch. 17.4 – 17.5

6. MANAGERIAL DECISIONS UNDER RISK AND UNCERTAINTY

1. Commodities, currency, and risk management
2. Individual choice and attitudes toward risk
3. Market equilibrium with risk

Cases: “When Oil Prices Break Bad: A Crude Case Study” (write-up)
“Failures in Franchising” (for class discussion only)

Readings: “A Marketer’s Guide to Behavioral Economics” (Welch, *McKinsey Quarterly*)

Textbook: Exchange rates and hedging: pp. 582–583
Risk: Ch. 14 intro, Ch. 14.1 – 14.4
Oil drilling and shutdown: pp. 242–243 & p. 494
Behavioral economics of risk: Ch. 4.6 & 14.5
Present/Future Value: Appendix 7

7. INFORMATION, NETWORKS, AND THE INTERNET

1. Asymmetric information and incentives:
 - a. Moral hazard
 - b. Adverse selection and signaling
2. Information and networks
3. The Internet and advertising
4. Externalities
5. Property rights, knowledge goods and intellectual property

Case: “Zombie Apps” (write-up)

Readings: “Why free parking is bad for everyone” (Stromberg, *Vox.com*)
“Get Paying Users by Giving Your App Away” (Smith, *The Accelerators*, *WSJ.com*)
“The Economics of Freemium” (Holmes, *The Accelerators*, *WSJ.com*)

Textbook: Adverse selection: Ch. 15 intro, Ch. 15.1 – 15.2
Moral hazard: Ch. 7 intro, Ch. 7.3 & 15.3 – 15.5
Networks: Ch. 9.6
Advertising: Ch. 9.5
Externalities: Ch. 16.4
Property rights & Intellectual property: Ch. 16.5 – 16.6

8. ADVANCED TOPICS IN BUSINESS STRATEGY

A. SINGLE-PRICE STRATEGIES

1. Strategic interactions
2. Collusion
3. Predatory pricing and entry deterrence
4. Repeat interactions
5. Antitrust policy

Case: “Sony PlayStation and Microsoft Xbox” (write-up)

Readings: “Game Theory: How to Make it Pay” (Garicano, *Financial Times*)
“Are We in Danger of a Beer Monopoly?” (Davidson, *N.Y. Times*)
“War games” (*The Economist*, Oct 13, 2005)

Textbook: Market structure: Ch.7.5 & Ch. 11 intro
Oligopoly & Collusion—Cartels: Ch. 11.1
Game theory and strategic interactions: Ch. 12 intro & Ch. 12.1 – 12.3
Repeated games: Ch. 13 intro & Ch. 13.1
Sequential games: Ch. 13.2 & 13.5 – 13.6
Deterring entry: Ch. 13.3 – 13.4
Antitrust Policy: pp. 372 –374 & Ch. 16.3

B. MULTI-PART PRICING AND NON-PRICE STRATEGIES

1. Price discrimination (1st, 2nd, 3rd degree)
2. Bundling and tying
3. Peak-load pricing
4. Antitrust policy

Cases: “A Threat to Scholarly Communication” (class discussion only)
“Bundles of Joy” (class discussion only)
“Pink Tax” (if available, for discussion)

Readings: “Uber’s Surge Pricing is Totally Logical and Fair. So Why Do People Hate it So Much?” (Neil Irwin, *The Washington Post Wonkblog*)
“Websites Vary Prices, Deals Based on Users’ Information” (Valentino-Devries et al., *Wall St. Journal*)
“A Marketer’s Guide to Behavioral Economics” (Welch, *McKinsey Quarterly*)

Textbook: Price discrimination: Ch. 10 intro & Ch. 10.1 – 10.5
Bundling: Ch. 10.6
Peak-Load Pricing: Ch. 10.7
Antitrust policy: Ch. 16.3

9. SELECTED TOPICS IN BARGAINING AND AUCTIONS (Time Permitting)

1. Bargaining Theory and Applications
2. First and Second Price Auctions
3. Auction Strategies and Winner’s Curse

Readings: “The Bargaining Tale” excerpt from Economic Fables, Ariel Rubinstein, p. 29-34

Textbook: Auctions: Ch. 12.5

TENTATIVE SCHEDULE OF CLASSES (AS OF JAN. 8, 2017)*

Week	Dates	Topic	Cases
1	Tu 1/10 Th 1/12	1. Preliminaries / Individual & Market Demand 2. Individual & Market Demand	<i>Electric Power Purchasing</i>
2	Tu 1/17 Th 1/19	2. Individual & Market Demand 3. Costs & Profit Maximization	<i>O2, Brute **</i> <i>Demand 4 Tagamet</i>
3	Tu 1/24 Th 1/26	3. Costs & Profit Maximization 4. Competitive Supply & Market Analysis	<i>Moo've on Out**</i>
4	Tu 1/31 Th 2/2	4. Competitive Supply & Market Analysis 4. Competitive Supply & Market Analysis	<i>Sugar Import Quotas</i>
5	Tu 2/7 Th 2/9	5. Global Business PRACTICE QUIZ IN CLASS	<i>Practice Quiz</i>
6	Tu 2/14 Th 2/16	5. Global Business 6. Managerial Decisions under Risk	<i>Failures in Franchising**</i>
7	Tu 2/21 Wed 2/22 Th 2/23	7. Midterm Exam Review MIDTERM EXAM 7:00 – 9:00 PM	Review (Attendance Optional)
	2/25-3/5	SPRING BREAK!!!!	
8	Tu 3/7 Th 3/9	6. Managerial Decisions under Risk 6. Managerial Decisions under Risk	<i>When Oil Breaks Bad</i>
9	Tu 3/14 Th 3/16	7. Information, networks, and the Internet 7. Information, networks, and the Internet	<i>Zombie Apps</i>
10	Tu 3/21 Th 3/23	8.A Single-Price Strategies 8.A Single-Price Strategies	
11	Tu 3/28 Th 3/30	8.A Single-Price Strategies 8.A Single-Price Strategies	<i>Sony PlayStation & MS Xbox</i>
12	Tu 4/4 Th 4/6	8.B Multi-Part/Non-Price Strategies 8.B Multi-Part/Non-Price Strategies	<i>Scholarly Communication**</i> <i>Bundles of Joy**</i>
13	Tu 4/11 Th 4/13	PRACTICE QUIZ 2 IN CLASS Bargaining/Auctions	<i>Practice Quiz</i> <i>Last Class & Pink Tax**</i>
14/15	Tu 4/18 Th 4/27	Final Review Session FINAL EXAM 10:30am – 12:30pm	Review (Attendance Optional)

*This schedule will be posted and regularly updated on the course website.

** For class discussion only, NOT to be turned in.