

INTRODUCTION TO MICROECONOMICS

Economics 202-0-20 ♦ Winter 2020



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Class Meetings and Attendance

We will meet 11:00 – 11:50AM on *Mondays, Wednesdays and Fridays* in Fisk Hall 217. Refer to the attached schedule for important dates to mark on your calendar. Attendance is not mandatory in this course, but it is expected, and some material will be presented only during class (even if many of the slides and notes are posted to Canvas). If you do miss class, it is your responsibility to track down handouts, notes or any other information (especially regarding exams) you may have missed. When making your rational attendance choice, remember that secondhand notes may not be clear or complete, lectures will not be repeated in office hours, and that much can be learned from our collective classroom experience.

Office Hours and Communication

Your best way to contact me is by email, which I check regularly and try hard to answer within 24 hours. When sending email, please include ECON202 in the subject. I will post materials and announcements on Canvas so please check Canvas and your NU e-mail daily. You are invited to chat with me during my regular office hours, which will be Tuesdays 1:00–3:00PM and Thursdays 11:30AM–1:30PM in KGH 3467. If these times are infeasible for you, please ask or email me for an appointment; my other winter courses meet TTh 9:30-11AM and W 6-9PM. In office hours, you may find groups of students discussing problems (from the textbook, homework or old exams); former students have found a collaborative approach to learning helpful. I'm also happy to have private conversations about your standing the course, the ECON major, careers, NU life, and whatnot. I am the department's First-Year Adviser, so office hours may be busy around registration.

Teaching Assistants and Discussion Sections

Our two graduate teaching assistants will lead weekly 50-minute discussion sections at the rooms and times listed below. Sections are not required, but I expect you to attend one of the four sections beginning the second week of class. In typical discussion sections, the TAs will build upon homework problems you have previewed, present original material, review key ideas, discuss recent or upcoming exams, and/or answer your questions. Each TA will also hold office hours in the Kellogg Global Hub; their particular office-hour rooms and an updated office hours schedule will be posted to Canvas. Feel free to attend any TA's office hours that fit your schedule. The TAs will also lead review sessions and/or simulations before the exams.

Name	Section Rooms	E-mail @u.northwestern.edu	Office Hours in KGH
Jimmy Lee	5PM Tues @ Harris 107, 6PM Tues @ Shepard B25	JimmyLee	Mondays 4-6 @ 3198, Tuesdays 12-1 @ 3496
Genia Rachkovski	5PM Thurs @ University 122, 6PM Thurs @ Shepard B25	EvgeniRachkovski2024	Mondays 2-3 @ 3496, Thursdays 2:30-4:30 @ 3420



Jimmy:



Genia:

Prerequisites

You should be (or get) comfortable working with graphs, tables, and equations at the level of high school algebra. About $\frac{3}{4}$ of the class has taken ECON 201 [Introduction to Macroeconomics], but it is not required. If you are new to ECON, you should begin mastering the chapters on supply and demand immediately.

Required Textbook, Readings and Equipment

I have arranged for each student to access at zero cost a new e-textbook by Stevenson and Wolfers through the Achieve platform; in exchange for the access code, which I expect to distribute early the first week, the publisher (Macmillan) will ask you to fill out short surveys at the middle and end of the course. Alternatively, you could buy Acemoglu, Laibson and List's *Microeconomics* (published by Pearson), either the 2nd edition (2017, ISBN 0134492048) or 1st edition (2014, ISBN 0321391578). Additional study guides, software (e.g., MyEconLab), and online resources are strictly OPTIONAL; we will not use them officially, though you may find them helpful. For timely examples of economics in the news, I will post to Canvas PDFs of (or links to) recent articles from *The Economist*, *The Wall Street Journal*, *The New York Times*, *The Financial Times*, *The Atlantic*, *The Guardian*, and other newspapers or magazines. I strongly encourage you to invest in a straight edge (6 inches is sufficient). Some students also find it helpful to bring multicolored pens, since we will be drawing many graphs with numerous curves. We will not use calculators or other electronics during exams.

Course Overview, Goals and Objectives

Formally, economics is the study of the allocation of scarce resources among competing ends. Informally, economics helps us understand how household, business, and government decision makers respond to incentives; the importance of properly functioning markets in a modern capitalist economy; and the role of government in alleviating various market failures. Microeconomics focuses on individual decisions (often using cost-benefit analysis) and the inner workings of specific markets. Picking up where macroeconomics leaves off, this course will introduce the principles of microeconomics, and teach you how to apply these concepts to real world scenarios. Thus, this course is aimed not only at potential economics majors, but also at any student who desires an enhanced ability to understand the popular press, critically analyze government policies (or lack thereof), and use microeconomic literacy and numeracy to make better choices as a consumer, producer, investor, or voter. Specific course objectives are to:

- Help you understand and apply fundamental economic analysis
(Can we predict the effects of Cook County's sweetened beverage tax or a \$15 minimum wage?)
- Familiarize you with jargon used by the media
(initial public offering, too big to fail, fixed rate mortgage, cap and trade, Chapter 11 bankruptcy)
- Dispel common misconceptions and carefully consider controversial topics
(Do monopolies rip off consumers? Are CEOs overpaid? Do profits rise with prices?)
- Increase the breadth of your understanding with discussions of current economic issues
(Automation; fracking technology and energy markets; trade secrets and corporate espionage)
- Prepare you for advanced study in economics, marketing, finance or related fields – and post-NU life
(How have recent events affected investing, borrowing, and job seeking?)

Learning Outcomes

During this course you will use two basic tools of economic analysis (equilibrium and comparative statics) to model and study a variety of economic problems, including many involving market failures. After completing this course you will be able to:

1. Apply the model of supply and demand to critique a variety of government policies in markets that may or may not be characterized by market failures (i.e., violations of perfect competition)
 - Draw supply & demand curves and use them to analyze (dis)equilibrium in competitive markets.
 - Apply measures of elasticity to characterize the shapes of demand and supply curves.
 - Explain how the "Invisible Hand" leads to a social optimum with decentralized decision makers in a market free of market failures.
 - Analyze effects and efficacy of various forms of government intervention to address market failures in inherently competitive markets.
 - Explain why governments exist and how to provide the socially optimal level of public goods.
 - Graphically analyze positive and negative externalities and explain the relative merits of the numerous approaches we use to address them.

2. Evaluate the actions of profit-maximizing firms by using producer theory
 - Use a production function to characterize the technology available to a firm and show how much output a firm can produce with any given set of inputs.
 - Explain the relationships between technologies, costs, and supply decisions (e.g., shutdown)
 - Use cost curves and a (residual) demand curve to analyze the optimal production choices of a profit-maximizing firm in a variety of market settings: perfect competition, monopoly, monopolistic competition, and oligopoly.
 - Differentiate among cost concepts (accounting costs, economic costs, implicit costs, explicit costs, fixed costs, variable costs, marginal costs, and sunk costs) and know when to use each.
3. Predict the behaviors of rational buyers by using consumer theory
 - Use net present value to make financial decisions for a wide variety of investments, including business projects, stocks, bonds, mortgages, and retirement accounts.
 - Use probability to model decisions under uncertainty, explain why risk-averse people may buy insurance, and evaluate possible solutions to the problems of moral hazard and adverse selection.

Teaching Methodology and Philosophy

You will have many opportunities to engage the material, including reading the textbook, attending and actively participating in lectures and TA-led discussion sections, working on practice exercises or problem sets either individually or in a group, and using office hours. The **readings** (from the textbook and recent articles) are meant to familiarize you with vocabulary and concepts, inspire questions, and give you a chance to ponder the material before we present similar ideas in different packaging. I assume that you have at least skimmed the relevant textbook chapter before class to preview the material. My **lectures** often take the form of PowerPoint presentations, though I will frequently ask for audience participation and occasionally ask you to work out short problems in class with a friend. Posted lectures are intended to take the place of a packet of course notes, so you should expect the PPTX slides to be unusually wordy and colorful. Moreover, I will not have time to cover all of the slides, so you will need to peruse some of them outside of class. Graded **problem sets** give you a chance to get your hands dirty and to prepare for both discussion sections and exams. I typically collect homework and immediately release the solutions on Monday mornings. Economics is like applied math, and solving problems is an important part of mastering the material. We will usually cover the relevant material before the problem set, but occasionally you will need to read ahead in the textbook and teach yourself some concepts. I encourage you to try the problems on your own, and then meet with classmates to discuss and compare answers. I.e., I want you to collaborate, but warn you that free riding on homework often leads to difficulty on exams, when you will have to solve problems on your own. For a simple test of your knowledge, try explaining a problem and its solution to a friend or try tinkering with assumption to construct some problems (with answers) on your own. The teaching assistants will use the **discussion sections** to provide insight and extensions of the homework, help you prepare for exams, and field your questions. The TA's will also lead several **review sessions** during the weeks of the midterms. The **exams** will test your understanding of microeconomics, including your ability to apply theory to economic problems. You should therefore focus on the systematic reasoning we are trying to develop, rather than on mere memorization. Economics does NOT lend itself to pulling all-nighters before exams. Later analysis relies on principles covered earlier, so the exams are cumulative implicitly, if not explicitly. In the spirit of transparency, I will post numerous old exams for you to review. You will note that while the set of material rarely changes, each exam looks a bit different as I cycle through a variety of ways of assessing your degree of mastery. Class is much more enjoyable when there is active involvement by many students, so be prepared to speak up now and then, and to **participate** in a Goldilocks sort of way – neither too rarely nor too often. It is both my desire and job to teach you, so please let me know if anything is frustrating your efforts so that we can try to remedy the situation. Part of your job as a responsible adult is to monitor your progress and seek help when necessary. Often it doesn't take much to get back on track if you take the first step of asking for assistance; if you feel you are in trouble, seek help early. You are welcome to use any of our **office hours**, which are a wonderful time to not only clarify material but also to chat about NU, careers, hobbies, research, and life. ☺ Given how the course is designed, you should adopt an active approach to learning: once you think you understand the material from the readings and lectures, work problems on old exams for practice and regularly ponder connections: how does all of our material fit together?

Evaluation

Your course grade will be based on your performance on weekly problem sets and three exams. The relative weights of these graded components and some important dates are as follows:

<u>COMPONENT</u>	<u>IMPORTANT DATES</u>	<u>Points</u>	<u>% of Grade</u>
<i>Participation</i>	<i>Throughout the course</i>		<i>For borderline cases</i>
<i>Problem Sets (best 8 of 9)</i>	<i>See Course Schedule for Due Dates</i>	40	10 %
<i>Unit 1 Midterm Examination</i>	<i>Friday, January 31, in class</i>	100	25 %
<i>Unit 2 Midterm Examination</i>	<i>Friday, February 21, in class</i>	100	25 %
<i>Unit 3 / Final Examination</i>	<i>Thursday, March 19, 9-11AM</i>	<u>160</u>	<u>40 %</u>
	<i>TOTAL</i>	400	100 %

Problem Sets: In most weeks I will distribute a set of five problems for you to work on individually or in groups. Problems are often based on old exams, the textbook, or recent articles. Each of the five problems will be graded on a 2/1/0 (correct; good try; omitted or way off) scale. Each problem set will feature instructions on how to submit it for grading; I expect to use Crowdmark-based online submissions, but if there are technical difficulties, we can always fall back on stapled sheets of paper submitted in bins at the beginning of class on the due date. Solutions usually will be posted shortly after the deadline. Each student must submit his or her own work separately. We do not accept late work and there are no make-up problem sets, but there will be at least nine of these ten-point problem sets and I will count your best eight scores. If you are unable to submit your problem set for some reason, you should employ a classmate to submit it on your behalf. It is very uncommon for a properly submitted problem set to be lost, but if that happens, that is the problem set score that will be dropped. **Exams:** The course is divided into three units, each followed by an exam; the third exam also contains big picture questions to test your overall mastery of the course. Exams will feature a diversified portfolio of questions and topics designed to test your ability to apply economic theory. Old exams with detailed solutions will be posted; I strongly suggest you use them to better understand the types and difficulty levels of problems you will be asked to solve, as well as how efficiently you will be expected to work. Calculators and other electronic devices are prohibited during exams. Due to the substantial costs and difficulties of marginal exam administration, there will be no make-up written exams. In the unlikely event that you cannot take a midterm exam for a legitimate and approved reason (e.g., illness or emergency) and contact me (or the Economics Department) prior to the start of the exam, then I will re-weight your other graded components (the new weights in the table would be 12% Problem Sets, 33% Midterm Exam, and 55% Final Exam). A zero exam score will be assigned if you miss any exam for an unexcused reason. We do not arbitrarily re-weight exams based on your performance, and if you take an exam, we must count it, so if you are not in a good state to take an exam, please inform me before you start taking the exam. You must take at least one midterm exam and the final to pass the course. According to <http://www.weinberg.northwestern.edu/handbook/policies-forms/final-exams.html>, it is WCAS policy that the final exam date and time are non-negotiable; please note that we offer this course every quarter (including the summer) in case you have time conflicts this quarter. **Grades:** Course grades will be based primarily on total points in the course, but I also take into account your ballpark grades on each exam, performance trends (improvement), and the difficulty of the exams. I grade to the curve rather than using an absolute percentage standard. In my experience, the average grade in ECON 202 has been a B (or about a 2.9 GPA). You are responsible for monitoring your scores and status in the course. Besides perhaps a few points for submitting your exam on time, there will be a modest amount of **extra credit** for completing online “Learning Curve” quizzes (with some minimum score) based on the S&W e-textbook readings. **Re-grading:** Occasionally, a student suspects an exam grading error and requests re-grading. My policy, which involves promptly submitting to me a written request, will be announced after the first exam.

Academic Support

Peer-Guided Study Groups – Registration Required for this Quarter-Long Opportunity

Peer-Guided Study Groups (formerly AMP & GSW) offer peer-led academic support in a small-group setting for students enrolled in this course. If you join the program, you will meet weekly with about 5 to 9 other students and a peer facilitator – a student who has already taken and done well in ECON 310-1. During the two-hour weekly sessions (*Mondays 3-5PM @ ANN G29 w/ Maria Ramos or Wednesdays 6-8PM @ LOC 314 w/ Noah Spector*), students review concepts, work through practice problems, raise questions, and work

together to develop answers. Past participants report that this program helped them stay on track, solidify their understanding of course concepts, and increase their confidence – all in a comfortable atmosphere. Students register for the full quarter on CAESAR and attendance is expected weekly. Study Group sessions are listed below course lecture and discussion sections (e.g., ECON 202-SG Peer-Guided Study Group: Introduction to Microeconomics). Please contact Borislava at borislava.miltcheva@northwestern.edu or 847.491.2731 with any questions about the peer-guided study groups.

Drop-In Peer Tutoring (No Appointment Needed!)

Drop-in tutoring sessions are a friendly, collaborative environment where you can come to get help (from a peer leader who has done well in the course) or just to study, either alone or with others. No registration or appointment necessary. Drop-in sessions are held Sundays from 3-5PM in room B25 of the Shepard Engagement Center (free snacks!), Wednesdays 8-10PM @ Shepard B25, and Thursdays 8-10PM @ 560 Lincoln. *This quarter's peer leaders are Mayrna Dababneh, Ruichen Gao, Mack Hoagland, Shivang Pant, Sally Kim, Ben Krieger, Grace Leupold, Kevin Rachwalski, and Licheng Su.* Please contact Una at una.mcgeough@northwestern.edu or 847.467.0148 with questions about drop-in tutoring.

Academic or Athletic Accommodation

Any student requesting accommodations related to a disability or other condition is required to register with AccessibleNU < accessiblenu@northwestern.edu OR 847-467-5530 > and provide professors with an accommodation notification from AccessibleNU, preferably within the first two weeks of class. I recommend that you use accommodations for which you qualify. I will reserve a quiet room close to our regular classroom for each exam, but you may also take exams at the ANU Office if you register in advance. Students on Northwestern's varsity athletic teams who expect an academic conflict due to an official NCAA event should ask Eileen O'Rourke in Academic Services < eileen.orourke@northwestern.edu OR 847.491.8805 to contact me on your behalf as soon as possible. For all types of accommodation, all information will remain confidential. Please make your plans early and keep me informed; the 24 hours before an exam are often very busy and I may not be able to handle last-minute accommodation requests.

Professionalism and Consumer Electronics Policy

We expect a reasonable degree of professionalism, broadly defined to include those things that generally contribute to an environment that is conducive to learning by being courteous to us and to your classmates. Do things that generate positive externalities, such as attending, smiling, participating and helping your peers. Avoid generating negative externalities in the classroom via tardiness, naps, noisy chatter, offensive language, etc. (Potential employers tend to frown upon these inappropriate behaviors, so now is a fine time to smooth out some of the rough spots.) Please plan your restroom stops around class, and if you must enter or leave during class, do so unobtrusively. During exams, please refrain from potentially distracting behaviors (e.g., pen-clicking, coughing). Serious disruptions will not be tolerated. The use of electronic gizmos in the classroom can be a nuisance to others, so please do not be disruptive. Students who want to use a laptop or tablet to take notes or follow along with lecture note PDFs may do so, but they should sit in the front of the room. *Smartphones should have the ringer turned off and be placed in pockets or backpacks.* Students should not make or receive phone calls, surf the web, play games, send or receive text messages, or check or send e-mails during class. If this becomes a problem, we may have to implement a "No screens" policy. No electronic devices (calculators, smartphones, headphones, watches, etc.) may be used during exams, and if you leave the room during an exam, you must leave your smartphone with a proctor.

Academic Integrity

Academic Integrity is taken very seriously at Northwestern. Students are responsible for reading and understanding Northwestern's Academic Integrity policies. All suspected violations of academic integrity will be reported to the Weinberg College Dean's Office. These include: cheating, plagiarism, fabrication, unfair advantage, unauthorized collaboration, and aiding and abetting of academic dishonesty. Students found in violation of academic integrity may receive a zero on the assignment or exam or a failing grade for the course, and may be suspended or permanently expelled from the University. See the WCAS website on academic integrity and Academic Integrity: A Basic Guide for more information.

Advertising, Survey, and Paperwork Storage Policies

I am frequently approached by students, researchers, and organizations interested in using scarce class time to administer surveys, recruit applicants or volunteers for experiment, etc. However, there are many alternative means of communicating or collecting information. If you have a message you would like to deliver to the class, please package it as a PDF file or a URL and if it is appropriate, I can post it on Canvas for students to view if they are interested. I plan to use Crowdmark to streamline the grading and recording of your exams. We convert your paper exam to a PDF, insert grading comments, automatically send your score to Canvas, and then allow you to peruse a digital version of your graded exam. In the unlikely case we cannot use Crowdmark, the TAs will have your graded exams and will return them to you in discussion sections. You are responsible for picking up these items in a timely manner and monitoring your scores. To respect student privacy, we will return exams only to their owner. Unclaimed midterms are shredded shortly after the end of the quarter, but I keep final exams on file for one year.

Reading Assignments

The following schedule is provided as a guide and may be subject to slight changes as our pace naturally varies. Each lecture will make apparent our progress in the textbook. Please mark on your calendars the important exam and due dates, which will only change under extreme circumstances and with sufficient warning. Do your best to keep up with the reading assignments, which will complement the lectures, and as you read, jot down your questions. If you find yourself getting bogged down in math, focus on the intuition and main ideas, then address the detailed economic methods later. Remember that economics tends to be cumulative in nature, so regularly ponder how each chapter adds to previous chapters. The lecture topics, problem sets and handouts reflect the issues I wish to emphasize, so use these to guide your studying.

For the most up-to-date information as we move through the course, check Canvas.

A syllabus is a contract between the instructor and students that provides information about the course and provides a commitment device to prevent arbitrary behavior. I will assume that you are familiar with, and agree to, all policies in this contract. If you object to, or do not understand, any part of this contract, please contact me immediately for clarification.

Winter 2020 Schedule of Planned Topics, Important Dates & Recommended Readings

Week #	Dates (PS due)	Lecture Topics and Important Dates <i>Recommended Chapters from S&W and ALL 2/e Microeconomics Textbooks</i>
UNIT 1: Welfare Analysis & Applications of Supply and Demand		
1	Jan 6, 8, 10	Introduction & Logistics; Supply & Demand (Curves, Shifters, Equilibrium); Elasticity & Welfare Analysis <i>S&W 1-5,7 ALL 1-5 [No TA sections this week] Friday is Add Deadline</i>
2	Jan <u>13</u> , 15, 17	Evaluating Govt Interventions in Competitive Markets: Price Controls, Occupational Licensing; Per-Unit Taxes and Subsidies); Taxes 101 <i>S&W 6 ALL 7,10 [Problem Set #1 due on Monday the 13th]</i>
3	Jan 20, (<u>21</u>) 22, 24	☺ <i>No Class Meeting on Monday, Jan. 20 – Martin Luther King, Jr. Day ☺</i> <i>Problem Set #2 will be due by 10:30AM on Tuesday, January 21</i> Public Goods and Public Choices; Externalities & Transactions Costs <i>S&W 10 ALL 9 Friday is P/N Deadline</i>
UNIT 2: Input Markets, Asymmetric Information, and Financial Decisions		
4	Jan <u>27</u> , 29, 31	Unit 1 Leftovers & Review; What is a Firm? <i>Optional Exam Simulations: MON 6:30-8:30pm @ Fisk 217; WED time & location TBA</i> UNIT 1 EXAMINATION – Friday, January 31, 11:00–11:50AM <i>[Exam covers Weeks 1–3] ANU students: 11AM @ TBA</i>
5	Feb <u>3</u> , 5, 7	Labor Markets: Productivity, Wages, Hiring Rules Inequality and Income Redistribution Uncertainty, Probability, Managing Risk with Insurance <i>S&W 11-13,19 ALL 11,15,16,18</i>
6	Feb <u>10</u> , 12, 14	Asymmetric Information (Moral Hazard & Adverse Selection) Fundamentals of Finance: Using Net Present Value to Evaluate Projects Capital Markets: Applying NPV to Stocks, Bonds, Loans, IRAs <i>S&W 20 ALL 15, 16, Finance (online) Friday is Drop Deadline</i>
UNIT 3: Choices of Profit-Seeking Firms in Four Market Structures		
7	Feb <u>17</u> , 19, 21	Unit 2 Leftovers & Review Game Theory <i>Exam Simulations: MON 6:30-8:30pm @ FSK217; WED 6:30-8:30 @ HRSL07</i> UNIT 2 EXAMINATION – Friday, February 21, 11:00–11:50AM <i>S&W 18 ALL 13 [Exam covers Weeks 4-6] ANU: 11AM @ TBA</i>
8	Feb <u>24</u> , 26, 28	Cost Concepts and Curves: From Production to the LR Cost Pitchfork SR & LR Decisions of Perfectly Competitive Firms (Entry, Shutdown) Monopoly <i>S&W 14,15 ALL 6, 12</i>
9	Mar <u>2</u> , 4, 6	Monopolistic Competition and Oligopoly Models of Firm Rivalry Business Strategy, Collusion, Mergers and Antitrust Price Discrimination; Unit 3 Leftovers & Review <i>S&W 14-17 ALL 14 5PM Friday is Withdrawal Petition Deadline</i>
10, Reading	Mar <u>9</u> , 11, 13	Course Summary & Final Insights (Monday) <i>Optional Review Sessions in class on Wednesday & Friday</i> <i>[No discussion sections this week. Regular office hours will be held.]</i>
11, Finals	Th, Mar 19	UNIT 3 / FINAL EXAMINATION – Thursday, March 19, 9:00–11:00AM <i>[Roughly 60% of the exam covers Unit 3, Weeks 7–10; roughly 40% features comprehensive/cumulative questions] ANU: 9AM @ TBA</i> According to WCAS policy, the final exam date & time are non-negotiable.