ECON 300 B: Intermediate Microeconomics

Spring 2024

Instructor:	Bocheng Zhang	**Time:**	Monday/Wednesday 8:30 - 10:20 AM
E-mail:	zhan0908@uw.edu	**Location*:**	DEM 126
Office:	Savery 319A	**Office Hours**:**	TBD

* The lectures of this class will be held in person only at Dempsey Hall 126. Remote lectures and recordings will not be available without prior notification.
** I am also available by email and on Zoom, and if you want to schedule office hours at a different time or schedule a Zoom meeting, please let me know.

Course Page: https://canvas.uw.edu/courses/1718685

Course Description
This course builds on the fundamental concepts and techniques learned in Introduction to Microeconomics - ECON 200. At the intermediate level, however, we will engage in a more mathematically rigorous treatment of microeconomics to sharpen our theoretical understating of economics. By the end of the course, you should be in a position to analyze economic policy, business practices and beyond, using the language and methods of modern economic theory. **Constraint optimization** is an essential tool for much of economic analysis and you will learn to solve these types of problems using Lagrangian multipliers. The material that we cover is essential for tackling upper level economics such as financial economics, game theory, labor economics, development economics, and industrial organization. Furthermore, the material learned here forms the basis of modern macroeconomics.

Prerequisites
ECON 200; either MATH 112, MATH 124, MATH 127, MATH 134, or MATH 145. You should have completed these courses successfully prior to taking this class. **Knowledge of differential calculus, graphing, and solving system of equations is also a critical prerequisite for this course.**
We will use mathematics from single/multivariable calculus and elementary probability and statistics frequently in this course and apply them to economic concepts. **These are not required prerequisites, but knowledge of these fields is helpful for this course.** We will briefly review calculus at the beginning of the class, as well as other mathematical tools used. If you need additional practice with math concepts for this course, I will post links to useful materials or you can come attend office hours. Ultimately, it is the student's responsibility to make sure they understand the prerequisite math concepts so that we can focus on economic interpretations and applications.

Add Code
If you need a add code, you may email me at zhan0908@uw.edu.

Course Requirements

There will be 5 problem sets and 2 exams. You are responsible for the materials covered in lecture as well as materials posted to the Canvas website (e.g., lecture notes, practice problems, practice exams, problem sets, solutions, ...). It is your responsibility to check Canvas regularly. Lecture notes will be posted before each lecture and the annotated version will be posted after each lecture.

Textbooks

The main reference for this course is ***Microeconomic Theory: Basic Principles and Extensions*** by Walter Nicholson and Christopher Snyder (*required*). As the textbook will mainly serve as a supplement to the course notes, you are free to purchase the 12th edition or the earlier 11th edition. I do not assign homework out of the book, however the text is useful for students to study for exams and homework.
You can find and purchase the textbook online; eTextbook and hardcover are both avaliable. **You do not need to purchase any online package.**
Students also find the following textbooks useful when seeing intermediate microeconomic theory for the first time. These two books are *optional*, I only mention here to the students who seeks extra help with the material.

- *Intermediate Microeconomics: A Modern Approach* (8th or 9th edition) by H R. Varian
- *Microeconomics: Theory and Applications with Calculus* (4th or 5th edition) by Jeffery Perloff

Grading Policy

Grades will be calculated based on the following *:

- Problem Sets (25%)
- Midterm (35%)
- Final (35%)
- Participation & Involvement (5% + 2%)

* Canvas will not round grades and I will also not round grades for an individual student. Grades in this class will be curved up as necessary at the end of the quarter so that the median student gets a grade point between 2.9 and 3.1, according to the Department of Economics Policy. Downward curve will not be applied to your grades.

Problem Sets

There will be 5 problem sets. Two are about consumer theory, one is about firm theory, one is about partial equilibrium and game theory, and one is about monopoly and imperfect competition.
All problem sets will be available online at the class webpage, no hard copies will be provided. Problem sets need to be submitted on Canvas on the assigned due date by 11:59 PM (scan or photo). **No late assignments will be accepted without prior notification**.

I do not require your responses to the problems to be typed, but all problem sets must be neatly done. **You need to include the question numbers in your responses.** Graphs and numerical calculations may be handwritten but must be neat and legible. You will lose points if it is nearly illegible.
If you want to type your assignments, you may use Word or LaTeX, or other word processors of your choice. LaTeXis particularly useful for math typing; there are many guides available online.

Exams
There will be one midterm exam and one final exam. The final exam is not cumulative. All exams will be closed-book and in-person. There will be no make-up exam if you miss an exam without a valid reason. Make-up exams are only given under prior notifications with a valid reason.
Exams will be held at DEM 126, the assigned classroom. The midterm exam will be held during the normal lecture hours. The time for the final exam is 8:30 AM - 10:20 AM, Tuesday, June 4 (see your MyUW). You are allowed to bring a double-sided cheatsheet and a simple non-programmable/non-graphing scientific calculator to your exams but are not permitted to consult any other outside resources, including discussing the exam with anyone else while you are taking it. Suspected violations of this policy will be taken seriously and reported to the student conduct office; you will also receive a zero for the exam.
The dates for midterm and final exams are May 6 and June 4, respectively. The materials covered in the tentative schedule may change but the exam dates will not.

Participation & Involvement
Lectures are designed to be in-person, and Zoom recording will not be avaliable without prior notification. Due to the difficulty level of this course, attending every lecture is highly encouraged, and it is your responsibility to keep up with the class throughout the quarter.
The 5% Participation grades will be awarded for showing up in class (I will take the attendance 5 times throughout the quarter randomly by asking you to submit a Google form). The 2% is an extra credit for active involvement.

Accommodations
Late problem sets and missed exams will not be accepted, and the participation grade for a missed lecture will be 0. Exceptions will be made for health, religious, and academic reasons, and accommodations may be possible for those with other challenges.
Should you require disability accommodations, please contact Disability Resources for Students at http://depts.washington.edu/uwdrs/ or 206-543-8924.
Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accomodation, is avaliable at https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/. Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request Form at https://registrar.washington.edu/students/religious-accommodations-request/.

Academic Misconduct

All students are expected to know and to abide by the University's Academic Misconduct policies as defined at http://www.washington.edu/admin/rules/policies/SGP/SPCH209.html#7. In particular, while you are encouraged to study with each other, all assignments for this course must be completed on one's own. Exams are closed-book must be completed without accessing outside information, whether from "textbooks", cellphones, your computer, or other sources. Failure to abide by these policies is likely to result in failing this course, and may result in further sanctions as described by the policy. Should I believe that you cheated or plagiarized on an assignment, you will receive a "zero" grade on that assignment. Please also read and understand the Economics Department policy on academic misconduct at https://econ.washington.edu/policy-academic-conduct. Below is how the Department of Economics define academic misconduct:

The Department of Economics has a policy on academic misconduct. Academic misconduct includes plagiarism, cheating on examinations or other individual projects or assignments, and the theft or alteration of other persons' work for the purpose of gaining academic credit or of enhancing grades. While it is perfectly fine to consult other resources for studying purposes, copying answers to homework questions from another source is considered cheating.

Tutoring

Office hours are a time for students to come and ask any questions they have about the class, the assignments, or the homework, and you should make frequent use of them. You can also receive free tutoring from the Department of Economics (via the Economics Undergraduate Board). For detailed tutoring resources, see https://econ.washington.edu/resources-students#tutoring

Laptop and Phone Policy

In order to ensure an active participation and to keep your attention on the important things (our class), please avoid distracting yourself through (unnecessary) electronic devices or applications. For further insights on the consequences of multitasking, I recommend the study by Bellur, Nowak, and Hull (2015) (https://bit.ly/2GnyTf2). They found that in-class multitasking leads to significantly lower performance.

Tentative Schedule (subject to change)		
Date	**Topic**	**Readings**
3/25	No Class	
3/27	Introduction & Math Review	NS Chapter 2, Math Review Notes
Consumer Theory		**Consumer Theory Notes**
4/1	Preferences, Utility, Indifference Curves	NS Chapter 3
4/3	Budget Set, Utility Maximization and Assumptions	NS Chapter 3-4
4/8	Utility Maximization Special Case, Marshallian Demand	NS Chapter 4
4/10	Demand Comparative Statics, Elasticity	NS Chapter 5-6
4/15	Expenditure Minimization, Hicksian Demand, Duality	NS Chapter 5-6
Firm Theory		**Firm Theory Notes**
4/17	Firms, Production, and Substitutability	NS Chapter 9
4/22	Cost Minimization	NS Chapter 10
4/24	Cost Minimization Special Cases, Profit Maximization	NS Chapter 10-11
4/29	Profit Maximization	NS Chapter 11
5/1	Midterm Review	
5/6	**Midterm Exam 8:30 - 10:20 AM**	

Tentative Schedule (Continued)		
Partial Equilibrium		**Partial Equilibrium Notes**
5/8	Partial Equilibrium, Consumer Surplus, Producer Surplus	NS Chapter 12
Game Theory		**Game Theory Notes**
5/13	Simultaneous Games & Best Responses, Nash Equilibrium	NS Chapter 8
5/15	IESDA, Sequential Games, Subgame Perfect Nash Equilibrium	NS Chapter 8
Monopoly		**Monopoly Notes**
5/20	Monopoly (Uniform Pricing vs. Price Discrimination)	NS Chapter 14
Imperfect Competition		**Imperfect Competition Notes**
5/22	Cournot Competition and Collusion	NS Chapter 15
5/27	*No Class: Memorial Day*	NS Chapter 15
5/29	Stackelberg and Bertrand Competition	
	Final Review as Recording	
6/4	**Final Exam 8:30 - 10:20 AM**	