

ECON 300C: Intermediate Microeconomics

Spring 2024

Instructor Information

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Class Information

Dates: Mar 25 – May 30, 2024
Time: T&Th 4:30pm – 6:20pm
Classroom: SAV 166

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 understanding 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.

Prerequisite

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.

Course Requirement

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 Announcement and Email regularly. Lecture notes will be posted before each lecture and the annotated version will be posted after each lecture.

Textbook

The main reference for this course is *Microeconomic Theory: Basic Principles and Extensions* by **Walter Nicholson and Christopher Snyder**. As the textbook will mainly serve as a supplement to the course notes, you can use either 12th edition or the earlier 11th edition. You do not need to purchase any online package for this course.

Some optional textbooks are also recommended:

- *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
- *Microeconomics (2nd edition)* by Bernheim and Whinston

Grading

Grades will be calculated based on the following:

- Problem Sets (25%)
- Midterm (35%)
- Final (35%)
- Participation (5%)

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. To make sure that grading is consistent and fair, I will not round overall grades when assigning grade point.

Problem Sets

There will be 5 problem sets. Two about consumer theory, one about firm theory, one about partial equilibrium and game theory, and one about monopoly and imperfect competition. I will post problems sets to canvas and you have at least one week to do the problem sets. Your answers to the problem sets should be submitted to canvas by 11:59 PM on the due date. **No late assignments will be accepted without prior notification.** You can submit your answers in pdf or photos, but make sure it is neat and clear.

Exams

There will be one midterm and one final. The midterm will take place on **May 2**, and the final exam will take place on **May 30** (the last day of instruction). Exams will be held in-person during normal lecture hours in the same classroom. You are allowed to bring a double-sided cheatsheet and a non-graphing scientific calculator to the 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. Make-up exams are only given under prior notifications with a valid reason.

Participation

Participating credits will be given based on how actively you participated in this class. It will be based on the following:

- Attend lectures
- Ask/answer questions in the class
- Come to the office hour

In specific, the participation part is graded out of 3 points, each item above worth 1 point. If you attend lectures, ask/answer questions and come to the office hour **frequently**, you will get full participation credits. It is okay if you miss some classes. I understand that your participation may fit somewhere in between, so I may assign grades likes 1.5 or 2.5.

You can replace any one item above with clear and detailed class notes. For example, if you never come to the office hour but you have very clear and detailed class notes, then you can also get 1 point. The total maximum participation point is 3 points.

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), and we will have CLUE session for this class during the academic quarter. It is a university-sponsored group that runs homework help and exam review sessions in the evenings for students in large lecture courses. For detailed tutoring resources, check <https://econ.washington.edu/resources-students#tutoring>, and <https://academicsupport.uw.edu/clue/> for CLUE sessions.

Accommodations

Late problem sets, writing assignment and missed exams will not be accepted without prior notification. Exceptions will be made for health, religious, and academic reasons, and accommodations may be possible for those with other challenges. If you need or desire

an extension for any reason, contact me in a timely fashion, as permitted by the need. There is no guarantee that you will receive an extension on any assignment, so plan your schedule carefully.

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 accommodation, is available at Religious Accommodation Policy. Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request Form.

Academic Misconduct

All students are expected to know and to abide by the University's Academic Misconduct policies as <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

| Tentative Course Time Schedule (subject to change) | | |
|--|---|---------------------------------|
| Date | Topic | Reading |
| Mar 26 | Introduction & Math Review | NS Chapter 2, Math Review Notes |
| <i>Consumer Theory</i> | | Consumer Theory Notes |
| Mar 28 | Preferences, Utility, Indifference Curves | NS Chapter 3 |
| Apr 2 | Budget Set, Utility Maximization and Assumptions | NS Chapter 3-4 |
| Apr 4 | Utility Maximization Special Case, Marshallian Demand | NS Chapter 4 |
| Apr 9 | Demand Comparative Statics, Elasticity | NS Chapter 5-6 |
| Apr 11 | Expenditure Minimization, Hicksian Demand, Duality | NS Chapter 5-6 |
| <i>Firm Theory</i> | | Firm Theory Notes |
| Apr 16 | Firms, Production, and Substitutability | NS Chapter 9 |
| Apr 18 | Cost Minimization | NS Chapter 10 |
| Apr 23 | Cost Minimization Special Cases, Profit Maximization | NS Chapter 10-11 |
| Apr 25 | Profit Maximization | NS Chapter 11 |
| Apr 30 | Midterm Review | |
| May 2 | Midterm 4:30-6:20PM | |

| Tentative Course Time Schedule (subject to change) | | |
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| Date | Topic | Reading |
| <i>Partial Equilibrium</i> | | Partial Equilibrium Notes |
| May 7 | Partial Equilibrium, Consumer Surplus, Producer Surplus | NS Chapter 12 |
| <i>Game Theory</i> | | Game Theory Notes |
| May 9 | Simultaneous Games & Best Responses, Nash Equilibrium | NS Chapter 8 |
| May 14 | IESDA, Sequential Games, Subgame Perfect Nash Equilibrium | NS Chapter 8 |
| <i>Monopoly</i> | | Monopoly Notes |
| May 16 | Monopoly (Uniform Pricing vs. Price Discrimination) | NS Chapter 14 |
| <i>Imperfect Competition</i> | | Imperfect Competition Notes |
| May 21 | Cournot Competition and Collusion | NS Chapter 15 |
| May 23 | Stackelberg and Bertrand Competition | NS Chapter 15 |
| May 28 | Final Review | |
| May 30 | Final Exam SAV 166 4:30-6:20pm | |