

# ARE 100A: INTERMEDIATE MICROECONOMICS

## Administration

- **Instructor:**  
Ashish Shenoy (shenoy@ucdavis.edu)  
OH: By appointment
- **TAs:**  
Stamatina Kotsakou (skotsakou@ucdavis.edu)  
Kaiwen Wang (kvnwang@ucdavis.edu )
- **Lectures:**  
Tuesday and Thursday 9–10:20am  
Zoom room: 938 4122 2113  
Password: ARE100A  
Zoom channel: ARE 100A Fall 2020
- **Sections:**  
TBA
- **Website:**  
<https://canvas.ucdavis.edu/courses/489971>

## Description

This is the first of two 4-unit courses that provide a technical introduction to microeconomics using calculus. Topics cover consumer theory, producer theory, and competitive market equilibrium. We analyze market outcomes, aggregate surplus, and heterogeneous impacts on different subgroups. We discuss policies to increase economic welfare as well as practical barriers to implementation, with examples drawn from agriculture, environment, labor, immigration, management, urban planning, and a number of other areas. The focus of this course is to develop and learn to apply a set of tools that can be used to analyze a broad variety of scenarios. The course material will loosely match the first several chapters of any undergraduate-level microeconomics text and is standard for a college intermediate microeconomics course.

This course relies on calculus, and students are expected to have an understanding of algebra, functions, and derivatives. Prerequisites are strictly enforced as per department policy, and any questions about prerequisites or enrollment should be directed to the department's awesome undergraduate advisors at [manecon@primal.ucdavis.edu](mailto:manecon@primal.ucdavis.edu).

## Learning Objectives

The goal of this course is to teach the basic tools economists use to analyze the world. Over the quarter, we will learn how to take a practical question, reframe it in economic terms, and then apply economic models to generate an answer. Students will be expected to learn the method of problem solving so do not focus on memorizing the answers from class. Instead, try to understand the steps we use to generate the answer.

There are two main learning objectives. First, this course will teach quantitative problem solving. We will use constrained optimization as the primary problem solving tool. By the end of the quarter, students should understand how to solve a constrained optimization problem using calculus, how to depict it graphically, and how to interpret the solution. Exams will include some questions that must be solved quantitatively with calculus.

Second, we will focus on how to apply the models from class to real-world problems. We will use a variety of both hypothetical and actual settings to understand how economic models can inform our decisions. Exams will include some word problems that ask students to identify the economic concept at work and its implications for the answer.

## Course Format

The COVID-19 pandemic prevents us from meeting in person, so everything will be remote. This quarter, there will be a combination of asynchronous and synchronous material. Each week, I will post a set of prerecorded lectures that students can watch at their own leisure. These lectures will cover the necessary content for the week.

There are two dates when synchronous attendance is mandatory: the midterm and final exams. The midterm will be in class from 9–10:20AM PDT on Tuesday, November 10, and the final will be during the registrar’s scheduled time from 10:30AM–12:30PM PDT on Monday, December 14.

We will use the rest of the scheduled course time for in-class discussion about the week’s topics. I will try to post a set of discussion questions ahead of time, and in class we will break up into small groups and chat about the answers. I will also reserve a portion of each class for questions about the lectures, homework, or other materials. Attendance at these discussions is entirely optional, so do not worry if you can’t make it. Class sessions will be recorded so students who can’t attend still have access to the content, and the recordings will be available until the end of the term.

This is a new and unexpected format for all of us. I will try to make the quarter run as smoothly as possible, but there will undoubtedly be some stumbles along the way. I’ll keep you updated, and adjust the course format as necessary to best accommodate everyone. At the end of each week, there will be a “quiz” on Canvas asking for feedback about the week. Please use these quizzes to let me know what is or isn’t working, and your answers will be anonymous unless you choose to include your name.

## Materials

Lectures will be posted in video format on the course website. An incomplete version of the lecture slides will be posted before each course as well. It is your responsibility to fill in the missing parts to help you study; a comprehensive version will not be posted. I will also post a set of lecture summaries on the website with the key details and formulas. These summaries will supplement the lectures but are not a substitute for them.

Additionally, there is a series of lectures produced by economics faculty at UCSD available to all University of California students. These videos cover very similar material and may be useful as a study aid. Videos are available via the course website.

The textbook of record is *Microeconomics: Theory and Applications with Calculus* by Jeffrey Perloff. This text, or anything comparable, may be a useful guide to review the course material but is not necessary. The text is available on reserve or electronically at the library or can be purchased electronically on the course website, at the bookstore, or on Amazon.

## Requirements

Attendance is optional in both lecture and discussion section except for exam dates. You will be graded on feedback participation, eight homework assignments, a midterm, and a comprehensive final exam. Please indicate your name, student ID, and course section on all materials you submit (except anonymous feedback answers). Final grades will consist of the following:

1. **Feedback (8 pts.):** Each week I will post an anonymous feedback “quiz” on Canvas. Please use this space to let me know what is or is not working about the class, or make suggestions to improve.
2. **Homework (12 pts.):** There will be a total of eight homeworks, due on Tuesdays. Students are encouraged to work together on assignments, but each student is responsible for submitting their own answers in their own words. Homeworks should be uploaded in .pdf format to the course website and will be graded for completion. Solutions will be posted the weekend before they are due in case you are stuck.
3. **Midterm exam (70 pts.):** There will be an in-class midterm exam on Feb. 6.
4. **Final exam (110 pts.):** There will be a comprehensive final exam on Mar. 16 at 10:30AM. Students whose score improves by more than 1.5 standard deviations from the midterm to the final will have a greater weight placed on their final grade. Both exams will be open book and open note, but collaboration is not allowed.

I do not offer any excused absences, late submissions, retakes, or extra credit for homeworks or exams. However, I recognize that life circumstances sometimes prevent students

from meeting all their obligations. To accommodate this, you can miss up to two homework submissions and three feedback quizzes before it will impact your grade.

If you feel there was an error in grading your exam, you must submit your original graded work along with a brief description detailing exactly where you believe the error to be and why. Your entire answer will be scored again, and your grade may decline if the scorer notices mistakes they missed the first time. You should only use this option if you are very confident there was a mistake in scoring.

## Notice of the Academic Code of Conduct

This course is bound by the university's Code of Academic Conduct. Note that it is a violation of the Code to post materials from this course on other websites or forums without the permission of the instructor. Full text of the Code can be found at <https://sja.ucdavis.edu/files/cac.pdf>.

Respect for privacy is an essential part of our classroom community. Images, text, screenshots, audio/video content from Zoom sessions may only be used for instructional purposes of this course. Participants should not distribute data captured from Zoom sessions to anyone outside the course, without appropriate consent from the individuals whose images/voice/data are involved. Unauthorized distribution or capture outside the course may violate federal or state privacy laws or University of California policies. This means, for instance, you should not post screenshots of your class, your instructor, or your classmates to social media

## Additional Student Resources

Additional student resources related to academic support, health & wellness, career options, and the campus community are available at <https://ebeler.faculty.ucdavis.edu/resources/faq-student-resources>, linked from the course website. The university also has a page of resources specific to coronavirus at <https://studentaffairs.ucdavis.edu/news/coronavirus-faqs> and at <https://campusready.ucdavis.edu/student-faq>, which will also be linked on the website.

This is an understandably stressful time for all of us as we try to manage our lives while also worrying about the health and safety of ourselves and our loved ones. Please don't hesitate to use the campus resources or reach out to me with concerns about your physical or mental health.

# Schedule

This is the planned schedule for the quarter. However, there may be some adjustments as we figure out remote instruction and navigate around world events.

Week 1 (10/1): Course introduction

Week 2 (10/6, 10/8): Preferences, Constraints, and Utility Maximization

Week 3 (10/13, 10/15): Comparative Statics

Homework 1 due Tuesday

Week 4 (10/20, 10/22): Consumer Welfare

Homework 2 due Tuesday

Week 5 (10/27, 10/29): Consumer Policy Analysis

Homework 3 due Tuesday

Week 6 (11/3, 11/5): Production Functions

Homework 4 due Tuesday

*Tuesday is election day! Remember to vote!*

Week 7 (11/10, 11/12): Midterm Exam

**Midterm exam in class on Tuesday**

Week 8 (11/17, 11/19): Production and Profits

Homework 5 due Tuesday

Week 9 (11/24): Market Equilibrium

Homework 6 due Tuesday

*Thursday is Thanksgiving, no class.*

Week 10 (12/1, 12/3): Aggregate Policy Analysis

Homework 7 due Tuesday

Week 11 (12/8, 12/10): Trade

Homework 8 due Friday

**Final Exam: Monday, 12/14 10:30AM–12:30PM**