

ECONOMICS 100A: MICROECONOMICS

Fall 2021, Zoom ID: 883-658-9887
MWF 10:00am-10:50am
MWF 11:00am-11:50am

Maxim Sinitsyn, msinitsyn@ucsd.edu
Office Hours: Th 10:00-noon

Discussion Sessions (start on 10/4):

A01	M 3:00pm-3:50pm	B01	M 5:00pm-5:50pm
A02	M 4:00pm-4:50pm	B02	M 6:00pm-6:50pm
A03	M 5:00pm-5:50pm	B03	M 7:00pm-7:50pm

TAs

Jinhyeon Han (jih420@ucsd.edu)
Fulvia Budillon (fbudillo@ucsd.edu)
Ariel Chiang (a1chiang@ucsd.edu)
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Office Hours

F 2pm-4pm
M 9am-11am
F 8am-10am
T 11am-1pm;
T 2pm-4pm
Th 1pm-3pm
W 4pm-6pm

Zoom ID or Office #

Seq 140
Econ 122
932-7500-9494
817-592-8363
632-246-1561
394-978-8304/Seq 233
956-4974-3877

Study Group Sessions: W 7pm-8:20pm at TLC 1505
F 3pm-4:20pm Zoom (Link on the SI Canvas site)
Jack Rosetti (jrosetti@ucsd.edu)

All questions regarding department or university policies, procedures, and processes (like class enrollments and waitlists, late adds, grading options for majors/minors, increasing seats/adding more sections) should be addressed to the Virtual Advising Center at vac.ucsd.edu

Course Objectives: As the first class in the micro sequence, Econ 100A is designed to teach you how to set up, solve, and analyze optimization models and apply these mathematical models to the theory of the consumer (commodity demand, labor supply, and consumption/savings decisions).

Course Structure: The course will contain live lectures on Zoom. All of the live sessions will be recorded and made available on Canvas.

Required Texts:

- (1) Varian's "Intermediate Microeconomics with Calculus," as an e-book with 1 year access. Available in Canvas through the Redshelf platform. THIS IS AN OPT-OUT SYSTEM. Students MUST opt-out after two weeks (by 10/09/21) or they will be charged (you will get lots of notification)
- (2) Mark Machina's Econ 100ABC Math Handout.

Web Resources: You are encouraged to take advantage of the following supplemental material for the 100ABC sequence, available free over the Internet.

- (1) Martin Osborne's intermediate mathematics tutorial:

<http://www.economics.utoronto.ca/osborne/MathTutorial/index.html>

(2) Preston McAfee's Introductory textbook (this material is at a level between most microeconomics principles textbooks and Varian's more advanced treatment.) <http://www.introecon.com/>

Weekly Homework: Each week, I will post practice problems on Canvas. They will not be graded. The best way to prepare for the exams is to form study groups and practice doing the problem sets together after you spent several hours working on them on your own. I will post the answers after the problems are reviewed in TA sessions. The discussion sessions will be live and will be recorded.

Exams: We will have four tests in this class (including the final exam). The tests during the quarter will take place during the times listed in your schedule – at 5pm on Fridays, 10/15, 10/29, and 11/12. The last test will take place during the scheduled time of the final exam for this class, at 8am on Saturday, 12/04. Each test will carry equal weight of 25% each.

There will be a technology quiz assigned during the first week.

All exams are closed book, but you can use a calculator. While I will do what I can to keep to this structure of the assessments for this course, the evolving situation may make it necessary for me to make a change.

Academic Integrity: All exams will be administered through Canvas. For all exams, you will have to host your own Zoom meeting and recording yourself taking the exam using the “screen share” with your video and audio on. After you are done with the exam, you will have to upload the zoom recording on Canvas. I will post a separate document detailing the steps you have to follow. If the video is not uploaded within the 12 hour window after the end of the exam, there will be a 5pt penalty, if it not uploaded within the 24-hour window, a 10pt penalty, etc.

I reserve the right to conduct an oral exam (via Zoom) to make sure that it was each student's own work submitted on Canvas. Students could be chosen randomly for this evaluation. Therefore, if you are scheduled for an oral exam, it does not mean that you are suspected of an academic integrity violation.

Regrade Requests: You will have one week during which you can request a regrade of your exam. You will have to write an email to be with the exact description of the place in your exam which you think was not graded properly. Your whole exam will be regraded, and your score can go up or down. You are allowed only one regrade request for the quarter. However, if your request is successful (your score goes up), you will get another regrade request.

Getting info on grad schools: What would inspire someone to pursue Economics Graduate School? What is PhD life like? Do your TAs/professors draw supply and demand curves, make mad money on the stock market, or re-hash the infamous Hayek/Keynes debates all day?

ECONnected connects you with Econ PhD students to discuss these questions.

Whether you know graduate school is for you, and you want to talk about the best strategy for your application process, or you're only starting to consider graduate school and just want to learn more, we are here to get you the information you need.

If you are interested in speaking with a current economics PhD student, please fill out [this google form](#).

Questions? Email us at econnected-g@ucsd.edu.

Schedule:

Week	Topic	Text Chapter./ Math Handout Section	Video (IMVH)
1	Mathematical Review #1	Sections B and C	A1, A2
2	Consumer Preferences, Utility, Budget Constraint	2, 3, and 4	C1, C2a
3	Mathematical Review #2	Sections D and E	A4
4, 5	Utility Maximization and Demand Functions	5 and 6	C2
6, 7, 8	Comparative Statics of Demand	8	C3-C7
9	Supply of Labor	9.8	C8
10	Supply of Saving	10	C9

Final (Saturday, Dec. 4th, 8am)

FAMOUS OPTIMIZATION PROBLEMS IN ECONOMICS

Optimization Problem	Objective Function	Constraint	Control Variables	Parameters	Solution Functions	Optimal Value Function
Consumer's Problem	$U(x_1, \dots, x_n)$ utility function	$p_1 \cdot x_1 + \dots + p_n \cdot x_n = I$ budget constraint	x_1, \dots, x_n commodity levels	p_1, \dots, p_n, I prices and income	$x_i(p_1, \dots, p_n, I)$ regular demand functions	$V(p_1, \dots, p_n, I)$ indirect utility function
Expenditure Minimization Problem	$p_1 \cdot x_1 + \dots + p_n \cdot x_n$ expenditure level	$U(x_1, \dots, x_n) = u$ desired utility level	x_1, \dots, x_n commodity levels	p_1, \dots, p_n, u prices and utility level	$h_i(p_1, \dots, p_n, u)$ compensated demand functions	$e(p_1, \dots, p_n, u)$ expenditure function
Labor/Leisure Decision	$U(H, I)$ utility function	$I = I_0 + w \cdot (168 - H)$ budget constraint	H, I leisure time, disposable inc.	w, I_0 wage rate and nonwage income	$168 - H(w, I_0)$ labor supply function	$V(w, I_0)$ indirect utility function
Consumption/Savings Decision	$U(c_1, c_2)$ utility function	$c_2 = I_2 + (1+i) \cdot (I_1 - c_1)$ budget constraint	c_1, c_2 consumption levels	I_1, I_2, i income stream and interest rate	$c_1(I_1, I_2, i), c_2(I_1, I_2, i)$ consumption functions	$V(I_1, I_2, i)$ indirect utility function
Long Run Cost Minimization	$w \cdot L + r \cdot K$ total cost	$F(L, K) = Q$ desired output	L, K factor levels	Q, w, r desired output and factor prices	$L(Q, w, r), K(Q, w, r)$ output-constrained factor demand functions	$LTC(Q, w, r)$ long run total cost function
Long Run Profit Maximization (in terms of Q)	$P \cdot Q - LTC(Q, w, r)$ total profit	none	Q output level	P, w, r output price and factor prices	$Q(P, w, r)$ long run supply function	$\pi(P, w, r)$ long run profit function
Long Run Profit Maximization (in terms of L and K)	$P \cdot F(L, K) - w \cdot L - r \cdot K$ total profit	none	L, K factor levels	P, w, r output price and factor prices	$L(P, w, r), K(P, w, r)$ factor demand functions	$\pi(P, w, r)$ long run profit function