ECONOMICS 100A: MICROECONOMICS

Winter 2021, Zoom ID: 883-658-9887   **Maxim Sinitsyn, msinitsyn@ucsd.edu**
MWF 10:00am-10:50am   **Office Hours: Th 9:30-11:30**

Discussion Sessions:
A01   Th 4:00pm-4:50pm
A02   Th 5:00pm-5:50pm

TAs	*Office Hours*	*Zoom ID*
Wendy Zeng (w5zeng@ucsd.edu)	W 5:00pm-7:00pm	794-378-567
Adrian Wolanski (awolansk@ucsd.edu)	W 12:00pm-2:00pm	626-530-0748
Yan Zhang (yaz006@ucsd.edu)	Tu 9:30am-11:30am	535-998-1215

Study Group Sessions: Fridays 4:00pm-5:20pm at https://ucsd.zoom.us/j/98005244785
                    Gil Peled (gpeled@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). Finally, we will examine the fundamentals of decision making under risk and uncertainty.

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

Required Texts:
(1) Varian's "Intermediate Microeconomics with Calculus," $37.60 (+10-15% bookstore mark-up) 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 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 three tests during the quarter will take place during the times listed in your schedule – at 7pm on Fridays, 1/22, 2/12, and 2/26. The last test will take place during the scheduled time of the final exam for this class. Each test will carry equal weight of 25% each.
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.

Regrade Requests: You will have one week during which you can request a regrade of your exam. 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 you request is successful (your score goes up), you will get another regrade request.

Bonus Quizzes: After each of the three exams (but not after the final exam) is graded, I will post a bonus quiz on Canvas. It will not have a time limit and will be available for three days. If a student who scored below a C- on the exam successfully completes this quiz, the difference between C- and their score will be halved. For example, if a C- cutoff on an exam is 18pts and a student received 12pts, by successfully completing the quiz, their score will become 15pts. Everyone is encouraged to work on those problems, but the score will be increased only for the successful completion of the quiz by the students who scored below a C- on a test.

Academic Integrity: We will be using LockDown Browser and a webcam for Canvas exams. I reserve the right to give an oral test if I feel it is necessary to uphold academic integrity.

This course requires the use of LockDown Browser and a webcam for online exams. The webcam can be the type that's built into your computer or one that plugs in with a USB cable.
Watch this brief video to get a basic understanding of LockDown Browser and the webcam feature.
https://www.respondus.com/products/lockdown-browser/student-movie.shtml
Download Instructions
Download and install LockDown Browser from this link:
https://download.respondus.com/lockdown/download.php?id=953813920
Once Installed
- Start LockDown Browser
- Log into to Canvas
- Navigate to the quiz
Note: You won't be able to access a quiz that requires LockDown Browser with a standard web browser. If this is tried, an error message will indicate that the test requires the use of LockDown Browser. Simply start LockDown Browser and navigate back to the exam to continue.
Guidelines
When taking an online quiz, follow these guidelines:
- Ensure you're in a location where you won't be interrupted
- Turn off all other devices (e.g. tablets, phones, second computers) and place them outside of your reach

- Before starting the test, know how much time is available for it, and also that you've allotted sufficient time to complete it
- Clear your desk or workspace of all external materials not permitted - books, papers, other devices
- Remain at your computer for the duration of the test
- If the computer, Wi-Fi, or location is different than what was used previously with the "Webcam Check" and "System & Network Check" in LockDown Browser, run the checks again prior to the exam
- To produce a good webcam video, do the following:
  - Avoid wearing baseball caps or hats with brims
  - Ensure your computer or device is on a firm surface (a desk or table). Do NOT have the computer on your lap, a bed, or other surface where the device (or you) are likely to move
  - If using a built-in webcam, avoid readjusting the tilt of the screen after the webcam setup is complete
  - Take the exam in a well-lit room, but avoid backlighting (such as sitting with your back to a window)
- Remember that LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted

Getting Help

Several resources are available if you encounter problems with LockDown Browser:

- The Windows and Mac versions of LockDown Browser have a "Help Center" button located on the toolbar. Use the "System & Network Check" to troubleshoot issues. If an exam requires you to use a webcam, also run the "Webcam Check" from this area
- Respondus has a Knowledge Base available from support.respondus.com. Select the "Knowledge Base" link and then select "Respondus LockDown Browser" as the product. If your problem is with a webcam, select "Respondus Monitor" as your product
- If you're still unable to resolve a technical issue with LockDown Browser, go to support.respondus.com and select "Submit a Ticket". Provide detailed information about your problem and what steps you took to resolve it

Schedule:

Week	Topic	Text Chapter./ Math Handout Section	Video
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 is on March 19th at 8:00am

FAMOUS OPTIMIZATION PROBLEMS IN ECONOMICS

Optimization Problem	Objective Function	Constraint	Control Variables	Parameters	Solution Functions	Optimal Value Function
Consumer's Problem	$U(x_1,...,x_n)$ utility function	$p_1 \cdot x_1 + ... + p_n \cdot x_n = I$ budget constraint	$x_1,...,x_n$ commodity levels	$p_1,...,p_n, I$ prices and income	$x_i(p_1,...,p_n,I)$ regular demand functions	$V(p_1,...,p_n,I)$ indirect utility function
Expenditure Minimization Problem	$p_1 \cdot x_1 + ... + p_n \cdot x_n$ expenditure level	$U(x_1,...,x_n) = u$ desired utility level	$x_1,...,x_n$ commodity levels	$p_1,...,p_n, u$ prices and utility level	$h_i(p_1,...,p_n,u)$ compensated demand functions	$e(p_1,...,p_n,u)$ 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