ECONOMICS 100C: MICROECONOMICS

Summer I 2018 **Maxim Sinitsyn, msinitsyn@ucsd.edu**
TTh 11:00-1:50, CSB 002 **Office Hours: M, T 2-3 in Econ Bldg 111**

TA	Session place/time	Office, Office Hours
Dodge Cahan dcahan@ucsd.edu	CSB 002; W 12:00-1:50	ECON 128; M 10:00-12:00

Course Objectives: Econ 100C examines departures from the neoclassical model including imperfect competition, strategy, asymmetric information, and signaling.

Required Texts:
(1) Varian, H. R. 2014. *Intermediate Microeconomics with Calculus.* W. W. Norton & Company, Inc.
(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 Ted. 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. I will post the answers after the problems are reviewed in TA sessions.

Exams: Grading will be based on two midterms (25% each) and a final examination (50%). The final exam will be cumulative. You must take both midterms. All exams are closed book, and you may not use calculators and cell phones during the exams.

Regrade Requests: I will give back the midterm exams in class. You can ask for a regrade before you leave the room with your exam. Your whole exam will be regraded, and your score can go up or down. If you don't think you have enough time to look at your exam after the class, you can pick up your exam from my office during my office hours.

Supplemental Instruction (SI) is a peer-led study group program that targets difficult classes. High achieving students who have previously taken the course or have strong content knowledge related to the course run the study sessions outside the classroom. The SI Leader facilitates the session in a way to help you work with the content and collaborate with peers who are taking the course as well.

SI works — data indicates that students who take advantage of SI earn better grades. In fact, 95% of the students who attended four or more SI sessions earned a higher grade in their courses and overall GPA (per data on SI support for Calculus and pre-Calculus at UC San Diego).

Supplemental Instruction Overview

- Involves weekly study sessions (3 per week) run by highly trained SI student leaders
- Targets high-risk courses
- Includes your instructor in the process
- SI Leader is in class each day with you

Supplemental Instruction is a key way to support your learning in this course. The peer-to peer interactions provides you with a session to explain, explore and elaborate what you know. Simultaneously, it allows you to clarify what you might struggle to understand.

SI schedule:

Tuesday 2pm	TLC 1505
Wednesday 3pm	Center 316
Thursday 2pm	TLC 1505

Schedule:

Week	Topic	Textbook Chapter	Video
1	Review of Perfect Competition, Government Intervention in the Market	16	E.2
	Monopoly	25	G.1
2	Pricing	26	G.2
	Midterm 1, July 12;		
2, 3	Game Theory	29, 20	F
4	Oligopoly	28	G.3
	Midterm 2, July 26;		
5	Externalities	35	H.1
	Public Goods	37	H.2
	Asymmetric Information	38	I
	Final (August 4, 11:30-1:30)		

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