

# Econ 20100: The Elements of Economic Analysis II

Summer Quarter 2019

<b>Econ 20100-1</b>
Class: Pick Hall 218, TR 9:00 AM – Noon

	<b>Professor</b>	<b>Teaching Assistant</b>
<b>Email:</b>	<b>Dr. G.C. Pieters</b> gcpeters@uchicago.edu	<b>Mohammad Moravvej</b> moravvej@uchicago.edu
<b>Preferred Salutation:</b>	Dr. Pieters or Prof. Pieters	Mohammed
<b>Office Hours</b>	Monday: 2pm-3pm Tuesday: 2pm-3pm Thursday: 2pm-4pm	Wednesday: Noon-1pm
<b>Location</b>	SHFE 419 or 428	SHFE 014 (Enter through SHFE 106)

The course website is on Canvas. Canvas tracks and logs all your activity (when/if you logged in, opened a quiz, etc.).

Course Announcements and Additional Materials: Announcements, additional readings, and problem sets will be placed on Canvas. All **registered** students are automatically enrolled. **To automatically receive emails when someone posts on the discussion (or I post an announcement) go to account>notifications and set the relevant sections to “notify me right away”.**

Course Description: This course is a continuation of ECON 20000. The first part of this course discusses markets with one or a few suppliers. The second part focuses on demand and supply for factors of production and the distribution of income in the economy. This course also includes some elementary general equilibrium theory and welfare economics.

Measured Objectives: Successful completion of this course requires that you demonstrate on homework assignments and in-class exams that you have satisfied the following two objectives:

- *New Knowledge:* Non-competitive markets, production, and general equilibrium implications.
- *New Skills:* Analysis and interpretation of mathematical theory within an economic context, particularly solution of maximization/minimization problems under constrained optimization.

Prerequisites: This class assumes you are comfortable with the contents of ECON 20000 and its pre-requisites.

Textbooks: There are two recommended textbooks for this class:

- (V) Varian, Hal. Intermediate Economics *WITH CALCULUS*.
- (L) Lima, Victor. Lecture Notes. Available for purchase from the Social Sciences Copy Room (SS 103).

I do not assign mandatory reading or homework from the textbook: both books serve as an additional resource if you are struggling with the material or need additional practice problems. They are written with different styles and students often differ over which one is “better”. (V) is available in the library.

Organization: In class I will discuss the application and theory of the course material and solve a few example questions. I will skip math steps: those are shown in the practice problem handouts. I write all the handouts, homework questions, and exam questions. I assume you are doing all homework problems and provided practice problems.

Technology Statement: You may use a laptop, tablet, or other device for taking notes. You may *not* use a personal device for any purpose unrelated to our class. **Do not harm the learning environment of others by watching TV shows/sports/movies/games/etc.** All devices should be silenced, and cell phones should be put away, except in the rare instance that I ask you to use them for an activity. I am easily distracted by the sound of a vibrating cellphone. If there is an urgent need to leave your cell phone on, such as a family emergency or an interview, let me know and sit near the back of the class so that you can step outside with minimum disruption. **Audio or visual recording of a class or discussion session is not allowed unless requested by SDS.**

## Course Resources

**Email:** I respond to email within 48 business hours. If I don't respond within this time frame it means I did not receive or notice your email so please send a follow-up. This guide contains email best-practices for contacting economics faculty (different fields have different email cultures): <http://www.jamestierney.com/educator/how-to-email-a-professor/>

**Office Hours:** *Everything in this course is "blind-graded" (students' identities are concealed during the grading process) therefore attending office hours to incur favorable grading or ingratiate yourself with the TA/professor will not work.*

- My scheduled office hours are open for meetings and discussion with students: no appointment is required. I see multiple students at the same time, so you do not need to wait outside if a student is already there.
- Bring your class notes or existing work on the homework problem for reference.
- I have separate office hours for general advising, discussions, or meetings about topics not related to course material. You can come to these office hours whether you are in one of my classes or not. These will be posted outside of SHFE 106, and sent to Econ Major list host at the beginning of the quarter.
- You may bring a friend who is not in the course to office hours if you need or want to.
- Office hours on the homework due date usually has many more students than the office hours further way.
- I am not available for impromptu (drop-in) meetings.
- During office hours I answer or guide questions about the homework material, re-teach material in a different way for students who were in class but feel they do not understand it as it was presented, or elaborate on extensions/implications of the material. I will not check your homework answers, but I can help you with concepts. The difference is in how you phrase your question...

**Availability of My Teaching Notes:** My teaching notes will never be made available for you. Ever.

**Canvas Forums:** I create discussion forums on Canvas for this course. You should feel free to post AND ANSWER questions on the forum. I do not mind if people use the forum to share answers to the homework questions before the assignment is due, though I will not respond and say whether the posted answer is right or wrong. No extra credit is given for participating on the forums but: forum response time may be faster than mine; your class mates may answer questions that I am not willing to answer or answer them in a different (and better) way; and trying to answer someone's question is a good way to test your own knowledge of the material. When my time is short I prioritize answering forum questions above email.

## Ongoing Resources and Policies

**Laptop Rental:** If you don't have a laptop you can rent one for free from the Techbar (hourly late fees are listed): <https://its.uchicago.edu/techbar/techbar-equipment-lending-terms-and-conditions/>

**Economics Graduate School** If you are thinking of going to graduate school in Economics you should make an appointment with Dr. Lima to discuss your interest and potential courses, resources, or opportunities. Contact Ms. Wong to set up an appointment.

**Letter of Recommendation Policy:** Send me an email that includes (1) a link to the program to which you are applying, (2) your current resume, (3) your transcript (unofficial is OK), (4) a brief statement that lists 3-4 things that \*my\* letter can convey which other letter writers cannot. I usually do not write letters of recommendation for students I've only had in one class, or for students who cannot articulate an answer to (4).

**Physical and Mental Health Resources:** There are no rewards for "toughing things out". If you are having any mental, physical, or other problems immediately contact Student Health and Counseling Services (773-702-4156). I provide accommodations requested by SHCS or SDS. UChicago has a free, informal, and anonymous Mental Health program available to all students (<https://wellness.uchicago.edu/mental-health/lets-talk/>).

Disabilities: I am evaluating you on your understanding of the material in this course, NOT your ability and understanding of the material in this course while you simultaneously undergo a panic attack/work through dyslexia/etc. However, I have no medical background and cannot determine the appropriate accommodations to provide. Student Disability Services (<https://disabilities.uchicago.edu/>) will work with you and determine what you need. Please let me know if SDS decides you need accommodation. Your use of any accommodation from SDS is confidential and is not recorded on your transcript, nor may I (or anyone else) discuss your use of it.

Responsible Employees: All University of Chicago faculty and TA's are classified as "responsible employees", required to report any discussions of sexual misconduct, including the identities of the student making the complaint and alleged perpetrator. You will receive an email once a report is filed but are not obligated to meet with anyone or engage in the process. Confidential Resource Individuals do not have to share identifying information. For more information, including phone-numbers, see <https://teaching.uchicago.edu/graduate-students/responsible-employee-information-title-ix/>

## Evaluation And Assessment Policies

### Collaboration/Cheating policy

- *Homework:* Each student is required to submit their own assignment, however collaboration and discussion of homework assignments is allowed and encouraged. Homework collaboration may result in identical answers and so identical homework assignments will not be penalized. **High homework scores cannot be used as evidence of understanding if contesting grades.** Copying the work of others without learning the material *may* result in high homework scores but *will* result in low scores in exams and the course. If you are unable to solve problems "closed book", you are not ready for an exam. You are not required or obligated to share your homework solutions or notes with anyone and should decline if you want to.
- *Exams (includes quizzes):* Given the collaborative nature of homework, exams represent the only measure of an individual student's ability to satisfy the measured objectives. Because of this a student's work on exams must represent only their own mastery of the material. Anything that can distort that measure – including but not limited to books, notes, programs on calculators, messaging devices, looking at another student's exam, discussion, or collaboration between students during exams – is strictly prohibited. If you are caught attempting to distort measurement of your abilities during exams you will fail the class and be immediately referred to the Dean of Students for disciplinary proceedings (which can result in expulsion from the University and deportation from the country).

### Policy on Technical Difficulties

Waiting until the last minute to submit the homework is inevitably when things go wrong. Past examples include (but are not limited to): being unable to reduce the file size sufficiently, not knowing how to submit assignments to Canvas, forgetting to upload a file, submitting a file that cannot be opened, or going home/on a trip and finding you do not have access to the internet/Canvas/pdf conversion. Technical difficulties are not reasons for a re-grade or an extension. I cannot and/or will not help you if you have technical difficulties, so do not email me or the TA. Google is your friend.

The following will automatically result in zero score for either the homework assignment or question, as applicable. (Non-negotiable, no exceptions under ANY condition):

- a) You do not turn in the homework through Canvas (for example, you email it to me or the TA instead).
- b) Attached file is not a .pdf file (or another format specifically requested in the assignment).
- c) Your file will not open, or the grader cannot be read due to poor quality.
- d) You accidentally "submit" the homework.

### General Re-Grade Policy

Any possible grading errors---and these may occur---must be brought to my attention by email within 7 days of the return of the homework or exam assignment. After 7 days regrades will not be allowed. This is to encourage you to review your assignment immediately. The email must contain the following information:

- i. The question number.
- ii. The correct answer (from the discussion section).
- iii. Why your answer is consistent with the actual correct answer.

### Canvas Formatting Re-Grade Policy

Canvas can be very particular about the format of the answers it will accept as correct: it may accept 0.5 but not .5 or  $\frac{1}{2}$ . You may request points back on up to two (2) assignments for questions in which your answers are otherwise correct but did not adhere to Canvas' formatting requirements. If you make mistakes on a third (or more) assignment you will no longer get points back. You will *not* get points back if your *units* are incorrect.

### Submitting your homework

- All homework must be submitted online through Canvas. You only get 1 attempt for the homework so do not click "submit quiz" until you are ready. **The official deadline is 11:59pm, Thursday.** No late assignments will be accepted, nor will due dates be changed. There will be no exceptions to this rule for any individual student.
- Some questions may ask that you submit files, or embed images. Take a (clearly visible, correctly oriented, less than 5MB) picture of your work and include this file as your answer. It is your responsibility to make sure that the files open correctly and display your work legibly.
- Submissions are graded per question with student's answers randomized and identities hidden (everyone's "4a", then "4b", etc.). Because of this is it impossible to "refer to answer for the preceding question" or "see graph for previous question". If you find yourself referring to your answer for a prior question, include the graph/picture/etc. again.

**Exams:** Quizzes will be held on Tuesday at the beginning of lecture. You will not receive extra time for the quiz if you are late. The comprehensive final exam is on the scheduled final exam date in class. I will NOT provide a review sheet, but I will provide an "Exam Information Guide" that lists the material the exam will cover, and the times/locations of exam office hours. See "Evaluation and Assessment Policies: Course Grades" for further information.

### Re-scheduling Exams

Exams are on the dates indicated on the Lecture Schedule. There are very few reasons I will agree to a make-up exam. **Forgetting, oversleeping, going on vacation, doing poorly, having many exams, or travelling are not reasons for me to give a make-up exam.** Homework assignments and other due dates will NOT be changed to accommodate a rescheduled exam. If I write a new exam for the re-scheduled student it is impossible to write one that exactly duplicates the difficulty of the original exam. Despite this the new exam will be considered equivalent to the regular exam for grading purposes.

### **Evaluation And Assessment Policies: Course Grades**

Your individual score will be calculated from the graded components of this class (homework, quizzes, final).

#### **Curves on components of your individual score:**

- Each homework and quiz is worth 25 points. Your lowest homework score and lowest quiz score will be dropped.
- If necessary, the homework, quiz, and final scores will be curved up so that either the class average or median (my choice) on each is 70 out of 100. There will not be a penalty if the average is above 70.

**Aggregated Individual Score ( $S_i$ ):** Your aggregated individual score is the highest of five different combinations of the graded components of this class. This score,  $S_i$ , will be compared to the cutoff score for letter grades,  $C_g$ , to determine your letter grade. The five plans are designed to provide different ways to succeed in the class.

$S_i$	I: Standard	II: Reduce Homework	III: Reduce Quiz	IV: Reduce Final	V: Drop Quizzes*
Homework	25%	10%	25%	25%	15%
Quiz	25%	30%	10%	40%	0%
Final	50%	60%	65%	35%	85%
Example: A student has 90% on homework, spectacularly fails the quizzes with 10%, recovers with 90% on the final					
Plan Score	70	66	82	58	90
Example Student's Individual Score: $S_i = 90$					

\*Plan V exists for all students but is specifically designed for those who miss the quizzes for any reason (sickness, travel, oversleeping, etc.). There are no make-up quizzes. Note that anyone on Plan V has by definition not completed >51% of the graded work in the course and is therefore not eligible for an incomplete grade.

**Grade Cutoffs:** Students will receive the highest letter grade for which their score,  $S_i$ , is not less than the cutoff for the letter grade,  $C_g$ , or:  $S_i \geq C_g$ . An F will be given to all students for whom  $S_i < C_D$ . I calculate the cutoffs for each letter grade using 3 different methods, and then assign the score cutoff for each letter grade by

$$C_g = \min(F_g, D_g, S_g)$$

I may decrease  $C_g$  further at my own discretion (for example: if the distribution is not well described by a normal distribution) but I will never increase  $C_g$ .

$C_g$	A	A-	B+	B	B-	C+	C	C-	D+	D
$F_g$ : Fixed	92	90	88	82	80	78	72	70	68	60
$D_g$ : Distribution based	$\bar{\mu} + 1.25\sigma$	$\bar{\mu} + \sigma$	$\bar{\mu} + 0.75\sigma$	$\bar{\mu} + 0.25\sigma$	$\bar{\mu}$	$\bar{\mu} - 0.25\sigma$	$\bar{\mu} - 0.75\sigma$	$\bar{\mu} - \sigma$	$\bar{\mu} - 1.25\sigma$	$\bar{\mu} - 1.5\sigma$
$S_g$ : Share of Students	10% receive A- or higher		25% receive B- or higher			50% receive C- or higher				
Example: The class has an average $S_i$ of 71, and a median $S_i=68$ , leading to an adjusted average of 70.										
$F_g$ : Fixed	92	90	88	82	80	78	72	70	68	60
$D_g$ : Distribution	82.5	80	77.5	72.5	70	67.5	62.5	60	57.5	55
$S_g$ : Share	88		82			59				
Example Cutoffs	82.5	80	77.5	72.5	70	67.5	62.5	59	57.5	55

The distribution-based cutoffs use the average ( $\mu$ ), median ( $m$ ), and standard deviation ( $\sigma$ ) of  $S_i$ , with  $\bar{\mu} = \mu - \frac{1}{3}\max(\mu - m, 0)$

- Canvas shows your grades under "Standard Grading Plan" and "Fixed Cutoffs" only. If you need help determining your grade, there is a grade calculator available on my website ([www.ginapieters.com](http://www.ginapieters.com)) that calculates all individual score plans, and then presents your highest possible grade. Neither I or the TA will not calculate your grade for you.
- **No Extra Credit:** There will be NO additional grade assistance unless it offered for the entire class. I will ignore all emails that ask for a bonus assignment or a "grade nudge" during or at the end of the semester. Everyone has equal opportunity to earn an A grade (or avoid an F). Some students may be able to study for 10 minutes and obtain an A, while others can spend an entire week and receive an F. Grades will NOT be adjusted to reflect the hours you work on the course material, your effort, your class participation, your office hours or discussion attendance, your personal worth as a student, your financial aid status, etc. Your grades reflect only your understanding of the material as evaluated by homework and exams.

**Other Course Grades** (<http://collegecatalog.uchicago.edu/thecollege/takingcourses/>)

- (W) "Withdrew from a course". Not used in computing GPA, must be requested by the 10<sup>th</sup> week.
- (I) "Incomplete" indicates that a student has completed >50% of the graded work in a class with a passing grade but has failed to do some portion of required work. I only assign an "I" grade for **an unforeseeable emergency**.
- (P/F) Pass/Fail: A "Pass" is assigned for all grades above a D. Economics majors need to pass this course with a C- or better, not a "Pass" to proceed, or for this course to count to the Econ Core.

## Course Schedule

The following represents an optimistic view of the speed of the course, and a best guess as to the order of the lecture topics. In the event that material changes, the date of exams and homework will **NOT** change, rather the content of exams and assignments themselves will be altered.

Week	Date	Summary*	Lecture Topic	Due
1	T, 7/30	1,2	Technology & Production Functions, Cost Minimization	QZ1
	R, 8/1	3,4	Cost Curves, Profit Maximization	HW1
2	T, 8/6	5,6	Firm Exit, Firm Entry and Multiple Firms	QZ2
	R, 8/8	7,8	Industry Supply & Market Demand in Partial Equilibrium, Economic Shocks in Partial Equilibrium	HW2
3	T, 8/13	9,10	General Equilibrium, Welfare Theorems	QZ3
	R, 8/15	11,12	Externalities, Public Goods	HW3
4	T, 8/20	13, 14	Monopoly and Price Discrimination, Game Theory	QZ4
	R, 8/22	15	Oligopoly	HW4
5	T, 8/27		<i>Catch Up</i>	QZ5, HW5
	R, 8/29		<b>Final Exam</b>	

\*Readings in (V) and (L) are indicated on the corresponding summary.

**Final Exam:** <https://registrar.uchicago.edu/final-exams>

### Tips for Success

- (1) Complete the Homework, And Review Your Assignment When It Is Returned
- (2) Review Topic Summary and Attempt Practice Problems Prior to Class
- (3) Attend Lecture and Discussion: Participate and Ask Questions!
- (4) Come to Office Hours to Check Your Understanding (and Ask Questions!)
- (5) Complete Assigned Readings (There are very few)
- (6) Work With People Who Think About The Material Differently Than You: Can You Understand Each Other?