ECONOMICS 101: MICROECONOMIC THEORY
INSTRUCTOR: JACOB KOHLHEPP
UCLA, SUMMER SESSION C, 2021
(Last Update: 11/2/2022)

Class Term: 6 Weeks
Lecture Days and Times: Tuesdays and Thursdays 1:00PM-3:05PM (PST)
Final Exam: Week 6, 1:00PM-3:05PM at the normal Zoom Link
Classroom/Office: Zoom links posted on CCLE
Office Hours: Tuesday 4PM-5PM and Thursday 9AM-10AM

Course Description: In this course students will learn to analyze economic problems where perfect competition is not a reasonable assumption. In order to analyze these problems, students will learn the basics of game theory and economic modeling. Using these tools, the course will cover the following list of topics: imperfect competition (oligopoly, monopolies), choice under uncertainty (risk aversion, insurance), asymmetric information (contracts, signaling), and externalities (pollution, R&D). Students will finish the course with a toolkit of economic models that can be used to understand the real-world behavior of people and firms.

Note On Examples and Applications: Although the primary goal of the course is to provide an overview of standard economic models, I will dedicate a significant portion of the class to applying these models to real problems. I will try to have applications that are interesting both to students wishing to pursue academic economics further and to students who plan to go into the private sector (economic consulting, business, etc).

Prerequisites: Economics 11 (or equivalent): Students are expected to be familiar with the basics of supply and demand, utility maximization, and profit maximization. Students are also expected to have a basic knowledge of multivariate differential calculus and basic probability theory.

Online Instruction: All classes will be streamed live via Zoom at the posted times. Recorded lectures will be posted later that day (generally that evening). An effort will be made to accommodate different time zones for office hours, exams and Q&A sessions.

Communication: Please use Campuswire (a link with invitation code will be sent out during the first week) for all class-related questions. Other people may benefit from the question, especially if it involves logistics or concepts. Only use email if the question is private or personal. I will respond to the forum once a day before 5pm.

Textbook: The course will be self-contained: it will not be necessary to use a textbook; all tested content will be in the lecture slides and practice problems. However, the course will be based heavily on Nicholson and Snyder (2012), “Microeconomic Theory (11th ed, International Edition).” The 12th edition will also work well as a reference. I will list practice problems from Nicholas and Snyder that will be helpful for extra practice.

Recommended Problem Sets: I will provide weekly problem sets. They will generally be more difficult than the tests. They will also be optional (they will not be graded). However, if you do not do any of the

problem sets it will be hard to pass the class. I encourage you to work on them alone first and then to seek out a study group for help when you get stuck. I will post detailed solutions one week after a problem set is assigned. I will also host Q&A sessions throughout the quarter to explain solutions.

Exams: There will be one midterm and one final. The weight on the midterm and the final will be either: 40% Midterm, 60% Final OR 100% Final whichever gives you a higher score. Letter grades will be assigned based on the standard economics department curve for core classes. Exams will be online over Zoom. They will be open book, but communication with others is prohibited and considered academic dishonesty.

Center for Accessible Education (CAE): Any student with a pre-existing illness or condition who requests special arrangements must (a) qualify under CAE rules for such special arrangements and (b) must take the exam with CAE. Any such arrangements with CAE must be communicated to the instructor during the first week of classes. For additional information and the qualification conditions of the Center for Accessible Education please visit their website at https://www.cae.ucla.edu/. All other students must take the exam at the scheduled time under the same time constraints. It is the responsibility of all students who request special arrangements with CAE to be familiar with all of their rules as well as the rules of this class.

Email Policy: Please try to post content-related/administrative questions to the CCLE forum first. Please use my email for personal questions. I will answer forum questions/email once a day.

Academic Dishonesty: Any cases of cheating will be reported to the Office of the Dean of Students. For more details, please refer to the Office of the Dean of Students website at https://www.deanofstudents.ucla.edu/Academic-Integrity

Tentative Class Schedule

Week 1, Lectures 1: Intro and Choice Under Uncertainty

Week 1, Lecture 2: Monopoly

Week 2, Lecture 1: Primer on Static Game Theory

Week 2, Lecture 2: Oligopoly, Static

Week 3, Lecture 1: Midterm (1st hour), Spatial Competition (2nd hour)

Week 3, Lecture 2: Finite Repeated Games

Week 4, Lecture 1: Infinitely Repeated Games

Week 4, Lecture 2: Incomplete Information

Week 5, Lecture 1: Asymmetric Information

Week 5, Lecture 2: Review/Application of Asymmetric Information - Obamacare and the Individual Mandate (not tested)

Week 6, Lecture 1: Review Session – Testing Uploading

Week 6, Lecture 2: Final Exam

Additional References (for further study)

Game Theory Video Handbook, UCSD Economics: To access, click the link with a puzzle piece next to it on the "Site Info" page of the course CCLE website. This tool is a series of lectures explaining different game theory topics. The lectures and explanations cover static, sequential and incomplete information games. Although it is not a substitute for lecture, and the notations may be different, it is often helpful to hear things explained by different people.

Game Theory by Giacomo Bonanno: This textbook is open access and looks like a thorough treatment of the mechanics of game theory. It may be helpful in learning game theory, especially if you are interested in pursuing economic theory in graduate school. Link: https://arxiv.org/abs/1512.06808

Games of Strategy by Dixit, Skeath Reiley and *The Strategy of Conflict* by Schelling: I have not read these books, but I have been told they are nice, less technical introductions to game theory that are not economic-specific. It might help if you are interested in the intuitions behind game theory. It is important to remember that the tool of game theory has a long history in several disciplines, including both mathematics and political science.