ECON 101: Microeconomic Theory

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Course Description
This course is designed for those students who have already gained some basic knowledge of microeconomics and calculus. As an intermediate microeconomic theory course, this course will mainly focus on the application of mathematical tools to a variety of economic problems and establishing the linkage between economic theory and real-world problems. Topics covered will include Optimization, Game Theory, Imperfect Competition, Risk and Uncertainty, Asymmetric Information in Insurance Market.

Please note that this course will be very compact and intensive since we will cover all the materials within six weeks.

Textbook (Not Required but Recommended)

Prerequisites

- **ECON-11 (or equivalent)**. Students are expected to be familiar with basic concepts in economics, including supply and demand, equilibrium price and quantity, utility and profit maximization.

- **Basic calculus and probability theory**. Students are expected to be equipped with basic knowledge of differential calculus and probability theory. Specifically, students should be familiar with integration, differentiation, expectation and the graphical interpretation of mathematical function.
Grading

- There will be two in-class exams: **one midterm and one cumulative final exam**. Out of the two scores for the exams, the lowest will be counted with weight of 25%, while the other will be weighted as 75%. For instance, having the scores of 80 for the midterm and 100 for the final, a student will obtain a score of $0.25 \times 80 + 0.75 \times 100 = 20 + 75 = 95$. The grade for the course will be determined according to the standard UCLA Economics Department curve.

- You will also be assigned with **weekly** problem set for practice. Though it will not be graded, it would be **YOUR** responsibility to solve all the questions and check with solutions.

Tentative Schedule

- Week 1: Introduction + Optimization Review (Chpt.3)
- Week 2: Choice under Uncertainty (Chpt.7)
- Week 3: Profit maximization and Monopoly (Chpt.14) + **Midterm**
- Week 4: Game Theory: Basic Concepts; Prisoner’s Dilemma; Mixed Strategies (Chpt.8)
- Week 5: Game Theory: Sequential Game; Repeated Games (Chpt.8)
- Week 6: Imperfect Competition: Oligopoly; Cournot Competition; Bertrand Competition; Product Differentiation (Chpt.15)

Academic Dishonesty

The Manual of the Los Angeles Division of the Academic Senate includes a number of regulations regarding examinations and grading.

- Regulation A-306(C) states: The final grade in a course shall be based upon the instructor’s evaluation of the student’s achievement in the course. When on an examination or other work submitted by a student, the student is suspected of having engaged in plagiarism or otherwise having cheated, the suspected infractions is to be reported to the appropriate administrative officer of the University for consideration of disciplinary proceeding against the student. Until such proceeding, if any, have been completed, the grade DR (deferred report) shall be assigned for that course. (See A-315) If in such disciplinary proceedings it is determined that the student did engage in plagiarism or other wise cheat, the administrative officer, in addition to imposing any discipline, shall report back to the instructor of the course involved, the nature of the plagiarism or cheating. In light of that report, the instructor may replace the grade DR with a final grade that reflects an evaluation of that which may fairly be designated as the student’s own achievement in the course as distinguished from any achievement that resulted from plagiarism or cheating.

- For more information, please refer to the website of Dean of Students: [https://www.deanofstudents.ucla.edu/Reporting](https://www.deanofstudents.ucla.edu/Reporting)