



蘇州大學
Soochow University

ECO 226 Quantitative Economics

Summer 2023

Course Credits: 4

Contact Hours: 55 hours

Instructor: TBA

Email: TBA

COURSE OBJECTIVES

This course is to provide students with a thorough understanding of core techniques used in quantitative economics and econometrics and their applications to testing economic theories and measuring magnitudes relevant for economic policy. The course serves as a foundation for subsequent studies of econometric methods. The main focus will be the analysis of cross sectional data using OLS regression techniques.

Upon Completion of this Course, students will be able to:

1. Understand the main techniques (most importantly, OLS regression) of quantitative economics and econometrics, including their theoretical properties
2. Understand how these techniques can be applied to test economic theories and measure economic magnitudes
3. Gained practical experience through empirical applications of the techniques using the software package STATA

Have a full grasp of mathematical/statistical topics and techniques such as algebraic manipulation, functions, simultaneous equations, optimization, descriptive statistics, probability theory, regressions

4. Be able to apply mathematical and statistical techniques to economic problems

PREREQUISITES

N/A



GRADING

Grades will be determined by accumulating points, with 100 points being the maximum, as follows:

ITEM	POINTS
Quizzes	20 Points
Midterm 1	20 Points
Midterm 2	20 Points
Final Exam	40 Points
Total	100 Points

Late submissions will be graded at the end of the course. Grades will be assigned according to the following rule:

$$A \geq 90 > B \geq 80 > C \geq 70 > D \geq 60 > F.$$

We reserve the right to make adjustments to the overall grading policy.

COURSE MATERIALS

Required Texts:

Microeconomic Theory by Andreu Mas-Colell, Michael D. Whinston, and Jerry R. Green.

Recommended (Optional) Texts or Other Materials:

None

COURSE TOPICS

MODULE	TASKS
Module 1	Topics: Topic 1: Basic algebra Topic 2: Manipulating and solving equations Topic 3: Basic mathematical notation and logic Topic 4: Functions of one variable Assessments: Quiz#1



Module 2	Topics: Topic 5: Linear and quadratic functions Topic 6: Polynomials Topic 7: Producing Data Topic 8: Displaying Distributions with Graphs Assessments: Quiz#2
Module 3	Topics: Topic 9: Describing Distributions with Numbers Topic 10: Density Curves and Normal Distributions Topic 11: Randomness Topic 12: Probability Models, The Binomial Distributions Assessments: Midterm#1
Module 4	Topics: Topic 13: General Probability Rules, The Poisson Distributions Topic 14: Means and Variances of Random Variables Topic 15: The Sampling Distribution of a Sample Mean Topic 16: Estimating with Confidence Assessments: Midterm#2
Module 5	Topics: Topic 17: Tests of Significance Topic 18: Using Significance Tests Topic 19: Power and Inference as a Decision Topic 20: Least Squares Regression Assessments: Final Exam

ATTENDANCE

1) Class attendance is required. Missing classes without permission will lead to decrease in overall grade.

Missing less than two classes: no penalty.

Missing more than two classes: 7% will be taken off from the overall grade.

If the instructor reports a student's frequent missing of class to the Soochow University Academic Administration Office, the student might get a written warning and might be prohibited from attending final exam.

2) Participants in this course are expected to arrive in class promptly and adequately



prepared. The primary objective of this course is to critically engage with the readings and the subject matter. Therefore, course participants are expected to have completed the reading prior to class and prepare thoughtful reflections/commentaries to share with fellow colleagues.

LEARNING REQUIREMENTS

- 1) Late assignments are not acceptable and are subjected to grade deductions.
- 2) Assignments submitted in the wrong format will be counted as not submitted.
- 3) Failure to submit or fulfill any required course component results in failure of the class.
- 4) Make-up for midterm and final exams only with valid excuses, as defined by the University.
- 5) In order to earn a Certificate of Completion, participants must thoughtfully complete all assignments by stated deadlines and earn an average quiz score of 50% or greater.

TECHNOLOGY POLICY

The use of electronic devices in class is distracting, both for the user and for the rest of the class. Only non-programmable calculators can be used in the tests and exam. Any attempts to use cell phones and other electronic communication devices will be seemed as cheating. Laptops are discouraged, unless you use them for activities DIRECTLY related to the course (eg., note taking, reading course documents).

ACADEMIC INTEGRITY POLICY

Soochow University highly values the academic integrity and aims to promote the academic fairness, honesty and responsibility. Any academic dishonesty behaviors and any attempts to cheats and plagiarism will be reported to the university administration office. A written warning and the relevant penalties will be imposed. The record might be shown on the official university transcript.

DISABILITY ACCOMMODATION

Soochow University is committed to maintaining a barrier-free environment so that



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students with disabilities can fully access programs, courses, services, and activities at Soochow University. Students with disabilities who require accommodations for access to and/or participation in this course are welcome.

Note:

Please contact the University Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material.