

Econ 113-02 Syllabus

Hyunjin Yun

2024, Summer

E-mail: hyun8@ucsc.edu

Class Hours: M/W 1-4:30pm

Office Hours by appointment: T 9:00 am -10:00 am

Instructor

- **Name:** Hyunjin Yun
- **Position:** A 4th-year Ph.D. candidate in Economics, Graduate Student Instructor, UCSC
- **Nationality:** South Korea
- **Research field:** Applied Microeconomics, Public Economics, Healthcare Market
- **E-mail:** hyun8@ucsc.edu
- **Award:** TA award for Excellence in Teaching 2022-23
Milam-McGinty-Kaun Award 2023-24

Teaching Assistants

- **Name:** Yoshihisa Shono
- **Position:** A 2nd-year Ph.D. student in Economics, UCSC
- **E-mail:** yshono@ucsc.edu
- **TA sections:** F: 1:00 pm - 2:00pm, F: 2:15 pm - 3:15 pm
- **TA office hours:** F: 3:30 pm - 4:30 pm

- **Name:** Sanjana Gupta
- **Position:** A 2nd-year Ph.D. student in Economics, UCSC
- **E-mail:** sgupt109@ucsc.edu
- **TA sections:** Th: 5:00 pm - 6:00pm, Th: 6:15 pm - 7:15 pm
- **TA office hours:** Th: 9:30 am - 10:30 am

1 Course Description

Practical methods for organizing and analyzing economic data, testing economic hypotheses, and measuring economic relationships. Regression analysis is the main empirical method, and basic statistics and probability theory is included. Students gain hands-on computer experience with an econometrics software package.

1.1 Learning Objectives

By the end of the course, student will: ◦gain a conceptual understanding of linear regression and ordinary least squares estimation; ◦understand the assumptions needed to interpret regression estimates and related statistics and be able to assess when these assumptions are likely to hold in practical examples; ◦become familiar with some common issues that arise in multiple regression models; ◦become proficient in the use of Stata – a statistical software package widely used by economists – to perform descriptive analysis of cross-sectional data, estimate multiple regression models, and interpret regression output; ◦ understanding of statistics and econometric theory sufficient to prepare them for upper- division econometrics coursework.

1.2 Course time allocation

Students should plan to devote a full 15 hours of time per week to the class, including: attending lectures (7 hours) and completing quizzes (0.5 hour); section attendance (1 hour); reviewing lecture notes, (up to 3.5 hours); problem sets (3 hours);

1.3 Lecture, Class Materials & Course Website

- Will be synchronous via Zoom and meets on M/W from 1:00 pm – 4:30 pm. We may take a break for 20 minutes, either split into two 10-minute breaks or as a single 20-minute break. Zoom links (for Class Hours, Office Hours, Discussion Sections) can be found in the Zoom tab in Canvas
- For the first class, you will need to register in Zoom – please do so with your first and last name. Please join on time and keep your mic on mute (unless asking a question). Please ask questions by unmuting your mic, or typing into the chat. I encourage you to keep your camera on!
- Lecture notes, slides, quizzes, and related materials will be posted in numbered Modules on Canvas.
- Textbook is *Introductory Econometrics; A modern Approach* written by Wooldrige, Jeffrey M.

1.4 Software

I will primarily teach the course in Stata, no other languages will be supported(in line with the department standard.) (6-month) Stata BE is sufficient. Please purchase Stata BE as soon as possible here: <https://www.stata.com/order/new/edu/profplus/student-pricing/> Stata can be installed up to three computers(I believe). Exams will not cover how to write codes, but cover how to read and interpret codes and Stata output.

1.5 Lecture attendance

◦ There is no attendance check for lectures to take advantage of the flexibility of online classes. Lecture recordings will be available on Canvas under the related modules. However, I strongly encourage you to attend lectures to ensure you have enough time to review for quizzes and assignments. Please do not watch recordings of two lectures within a single day, as this 5-week summer session is already very intensive.

1.6 Section attendance

○ Section attendance is **optional**, but it is strongly recommended to attend the sections. There is no regular sections to attend during the 5th week because the final exam is on Wednesday, but there will be *extra* sections for the final review by the TAs. We will discuss the scheduling of this final review section. Regardless of which section you are enrolled in, please try to participate in any section of your choice at least once a week. In these sections, the TA will work through Stata-related questions on assignments, showing you how to solve the questions and providing the answers using Stata. Additionally, you will learn how to interpret Stata output. Sections on will be recorded and posted on Canvas.

2 Grades

- **Midterm Exam: 12th Aug 1:30 pm - 3:30 pm (25%):** Online Midterm during the lecture; You will have 100 minutes to complete on 12th Aug within 1:30 pm - 3:30 pm. You will find the Midterm exam on Canvas. It is not a paper-based exam; you will see the questions and enter the answers directly on the screen. Further information about the exam will be posted on Canvas.
- **Final Exam: 28th Aug 1:30pm - 3:30pm (30%):** Online Final exam during the lecture; You will have 100 minutes to complete the final exam during the last day of lecture on 28th Aug. The final exam is cumulative. It will cover all the material you learn in Summer Session 2.(All of the material is inherently cumulative as the new material builds on the old)
- **Problem sets (30%):** There are 4 problem sets and you will enter answers on Canvas. You will work through Stata questions with a TA in sections. You must submit **Dofile**, which accounts for 10 points out of 100 on each assignment. Each assignment is scored out of 100 points, so the maximum Total PS Score for all four assignments is 400 points. This is reflected in the final score according to the following formula: $\min(\text{Total PS Scores}/10, 30)$. Due to the accelerated pace of the 5-week summer session, **late assignments will not be accepted for any reason**. Late submissions will receive 0 points. If you are unable to complete an assignment on time, submit it as incomplete to receive partial credit.
- **Quiz (10%):** After each lecture, there will be a quiz comprising a maximum of 4 simple questions, designed to be solvable within 10 minutes for those who attend the lecture. The deadline for each quiz is 11:59 pm of the next day following the corresponding lecture.
- **Default points (5%):** these points are awarded without any specific tasks.
- **The total grade may be curved depending on the distribution of grades and the proximity of scores to the cutoff. This ensures that no student is disadvantaged.**

2.1 Policies on exams

- **There will be no makeup exams.** If you miss one exam, 40% of the score from the exam you took will be calculated as the score for the missed exam. You will not pass this course if you miss both exams.
- Exams will be open book. You may consult any notes, but not communicate with classmates or other individuals. Questions will vary randomly across students. Suspected cheating will be investigated and taken seriously.

Time Table

Week	Lecture	Quiz	Problem set	Exam
7/29 - M	Syllabus, Introduction to Econometrics Type of Data Ch 1. Review of Probability and Statistics (1)	Quiz #1 Syllabus Acknowledgement Quiz #2 Deadline: 11:59pm 7/30 Quiz #3 Deadline: 11:59pm 7/30		
7/31 - W	Ch 1. Review of Probability and Statistics (2) Ch 2. Simple Linear Regression (1) - Population vs Sample	Quiz #4 Deadline: 11:59pm 8/1	PS#1 Deadline: 11:59pm 8/4	
Week 2	Lecture	Quiz	Problem set	Exam
8/5 - M	Ch 2. Simple Linear Regression (2) -SLR model assumption, Derivation, -Interpretation	Quiz #5 Deadline: 5pm 8/6		
8/7 - W	Ch 2. Simple Linear Regression (3) -Dummy variable, Log-transformation - R-squared, Unbiasedness, CLT	Quiz #6 Deadline: 11:59pm 8/8	PS#2 Deadline: 11:59pm 8/11	
Week 3	Lecture	Quiz	Problem set	Exam
8/12 - M	Online Midterm (100 minutes) within 1:30 pm - 3:30 pm			Online Midterm (100 minutes) within 1:30 pm - 3:30 pm.
8/14 - W	Ch 2. Simple Linear Regression (4) - Hypothesis test, Heteroskedasticity Ch 3. Multiple Linear Regression (1) - Introduction	Quiz #7 Deadline: 11:59pm 8/15	PS#3 Deadline: 11:59pm 8/18	
Week 4	Lecture	Quiz	Problem set	Exam
8/19 - M	Ch 3. Multiple Linear Regression (3) - MRL model assumption, Interpretation - Omitted Variable Bias - Irrelevant variable - Relevant variable, Multicollinearity	Quiz #8 Deadline: 5pm 8/20		
8/21 - W	Ch3. Multiple Linear Regression (4) - Hypothesis test: Comparing coefficient - Hypothesis test: Joint hypothesis test - Dummy Variable, Categorical variable - Fixed effect	Quiz #9 Deadline : 5pm 8/22	PS#4 Deadline: 11:59pm 8/25	
Week 5	Lecture	Quiz	Problem set	Exam
8/26 - M	Ch3. Multiple Linear Regression (4) -Interaction Term Ch4. Introduction to Quasi-Experiment - Ideal Experiment - Difference in difference - Instrument variable - Regression discontinuity	Quiz #10 Deadline : 5pm 8/27		
8/28 - W	Online Final Exam (100 mins) within 1:30m-3:30pm			Online Final Exam (100 mins) : within 1:30 pm-3:30 pm

Academic Integrity

All members of the UCSC community benefit from an environment of trust, honesty, fairness, respect, and responsibility. You are expected to present your own work and acknowledge the work of others in order to preserve the integrity of scholarship. Academic integrity includes:

- Following exam rules
- Using only permitted materials during an exam
- Viewing exam materials only when permitted by your instructor
- Keeping what you know about an exam to yourself
- Submitting your own original work

Academic misconduct includes, but is not limited to, the following:

- Disclosing exam content during or after you have taken an exam
- Accessing exam materials without permission
- Copying/purchasing any material from another student, or from another source, that is submitted for grading as your own
- Plagiarism, including use of Internet material without proper citation
- Using cell phones or other electronics to obtain outside information during an exam without explicit permission from the instructor

Violations of the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student's transcript. For the full policy and disciplinary procedures on academic dishonesty, students and instructors should refer to the Academic Misconduct page at the Division of Undergraduate Education.

Accessibility & Disability Accommodation

UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please affiliate with the DRC. I encourage all students to benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu. For students already affiliated, make sure that you have requested Academic Access Letters, where you intend to use accommodations. You can also request to meet privately with me during my office hours or by appointment, as soon as possible. I would like us to discuss how we can implement your accommodations in this course to ensure your access and full engagement in this course

Title IX & CARE

Title IX The Title IX Office is committed to fostering a campus climate in which members of our community are protected from all forms of sex discrimination, including sexual harassment, sexual violence, and gender-based harassment and discrimination. Title IX is a neutral office committed to safety, fairness, trauma-informed practices, and due process. Title IX prohibits gender discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking. If you have experienced sexual harassment or sexual violence, you can receive confidential support and advocacy at the Campus Advocacy Resources & Education (CARE) Office by calling (831) 502-2273. In addition, Counseling & Psychological Services (CAPS) can provide confidential, counseling support, (831) 459-2628. You can also report gender discrimination directly to the University's Title IX Office, (831) 459-2462. Reports to law enforcement can be made to UCPD, (831) 459-2231 ext. 1. For emergencies call 911.

Religious Accommodation

UC Santa Cruz welcomes diversity of religious beliefs and practices, recognizing the contributions differing experiences and viewpoints can bring to the community. There may be times when an academic requirement conflicts with religious observances and practices. If that happens, students may request the reasonable accommodation for religious practices. The instructor will review the situation in an effort to provide a reasonable accommodation without penalty. You should first discuss the conflict and your requested accommodation with your instructor early in the term. You or your instructor may also seek assistance from the Dean of Students office.