

ECON 113: Introduction to Econometrics

Summer 2018
UCSC Department of Economics

Lecturer

Alan Ledesma (aledesm6@ucsc.edu) Office hours: Tu 01:00 PM - 03:00 PM
E2 building room 405C
Lectures: Mo/We 01:00 PM - 04:30 PM
Physical Science 114

Teaching Assistants

Luka Kocic (lkocic@ucsc.edu) Office hours: We 11:00AM - 12:00PM
E2 building room 403G
Sections: Th 10:00AM - 11:05AM
Th 11:20AM - 12:25AM
Jianan Liu (jliu166@ucsc.edu) Office hours: Th 01:00PM - 02:00PM
E2 building room 403G
Sections: Th 02:20AM - 03:25PM
Th 03:40AM - 04:45AM

Exam dates

Midterm: Wednesday, July 11, from 03:00PM to 04:30PM
Final: Wednesday, July 25, from 01:30PM to 04:30PM

Course Description

This course covers methods for analyzing economic data, testing economic hypotheses, and measuring economic relationships. Regression analysis is the main empirical method, and basic statistical and probability theory is included. Students gain hands-on computer experience with Stata.

Prerequisites

Econ 11B: Mathematical Methods for Economists, AMS 5: Statistics.

Recommended Textbook

Primary: Introductory Econometrics: A Modern Approach [4th or 5th edition] by Jeffrey M. Wooldridge
Secondary: Introduction to Econometrics by James H. Stock and Mark W. Watson

Software

Small Stata is sufficient for this class (\$45 for a 6 month license, installed on 3 computers) Stata GradPlan: <http://www.stata.com/order/new/edu/gradplans/student-pricing/>

Grades

Quizzes: 10%, Assignments: 20%, Midterm: 30%, Final: 40%

- Quizzes (10%): There will be between 3 to 5 quizzes. Quizzes are typically less difficult than exams and they cover material from the current and previous class. They may be given at the beginning, middle, or end of the class.
- Assignments (20%): There will be 4 assignments. They provide an opportunity to practice methods and develop intuition. You will also analyze real data using Stata. You must submit

the STATA code you used to generate your results. Assignments must be turned in at the start of every Monday class and late assignments are not accepted.

- Midterm (30%): The exam may test any material covered thus far in the course. You are responsible for mastering material covered by the lecture notes, section notes, assigned readings, and assignments (including writing STATA code and interpreting the output). You will be expected to use what we have learned to solve new questions.
- Final (40%): The final is worth 40% of your total grade for the course. A comprehensive exam covering all topics from the course.

Regrading:

Requests must be submitted within one week of an exam being returned. With the exception of cases of simple arithmetic mistakes (points added incorrectly), the exam is regraded from scratch and the regraded score may be higher or lower than the original. In practice, regrades rarely result in changes in the grade.

Academic Integrity

All work submitted for this class must be your own. Collaboration on assignments is encouraged, but the answers you submit must be your own and based on your own understanding. Copying answers or STATA code is a violation of university policy. For more information on academic integrity at UC Santa Cruz, please see the following link: https://www.ue.ucsc.edu/academic_misconduct.

Course plan

Course readings have been selected to correspond to the material covered in lecture. The textbook has many examples to supplement those covered in lecture and very good practice problems at the end of each chapter.

		Monday		Wednesday	
	Time	Min.	25-Jun		27-Jun
	Week 1 (06/25 - 06/29)	01:00 - 02:10	70	Introduction to econometrics: Wooldridge 1.1-1.2	
02:10 - 02:20		10	<i>Break</i>		
02:20 - 03:20		60	Data and Sampling W. 1.3-1.4		Simple linear regression: Wooldridge 2.4-2.5
03:20 - 03:30		10	<i>Break</i>		
03:30 - 04:30		60	Descriptive statistic: W. A.1-A.2, B.1, C.1-C.2		Multivariate regression: Wooldridge 3.1-3.3
	Time	Min.	2-Jul		4-Jul
	Week 2 (07/02 - 07/06)	01:00 - 02:10	70	Multivariate regression: Wooldridge 6.2, 3.4	
02:10 - 02:20		10	<i>Break</i>		
02:20 - 03:20		60	Hypothesis testing (I): Wooldridge C6, 4.1		
03:20 - 03:30		10	<i>Break</i>		
03:30 - 04:30		60	Hypothesis testing (II): Wooldridge 4.2-4.3		
	Time	Min.	9-Jul		11-Jul
	Week 3 (07/09 - 07/13)	01:00 - 02:10	70	Hypothesis testing (III): Wooldridge 4.2-4.3	
02:10 - 02:20		10	<i>Break</i>		
02:20 - 03:20		60	Practical considerations: Wooldridge 7.1-7.7		Midterm (03:00 - 04:30) It covers all materials up to Hypothesis testing (III)
03:20 - 03:30		10	<i>Break</i>		
03:30 - 04:30		60	Causality and endogeneity: Wooldridge 9.2, 9.4, 9.5		
	Time	Min.	16-Jul		18-Jul
	Week 4 (07/16 - 07/20)	01:00 - 02:10	70	Differences-in-differences (I): Wooldridge 13.2-13.4	
02:10 - 02:20		10	<i>Break</i>		
02:20 - 03:20		60	Differences-in-differences (II): Wooldridge 13.2-13.4		Instrumental variables: Wooldridge 15.1
03:20 - 03:30		10	<i>Break</i>		
03:30 - 04:30		60	Fixed effects (I): Wooldridge 14.1		Regression discontinuity (I): Supplemental
	Time	Min.	23-Jul		25-Jul
	Week 5 (07/23 - 07/27)	01:00 - 02:10	70	Regression discontinuity (II): Supplemental	
02:10 - 02:20		10	<i>Break</i>		
02:20 - 03:20		60	Review		
03:20 - 03:30		10	<i>Break</i>		
03:30 - 04:30		60	Review		