## ECN 102: Analysis of Econ Data Summer Session 1 2025

Instructor: Remy Beauregard

Lecture time: MTW 12:10-1:50pm

Email: rebeauregard@ucdavis.edu

Lecture location: Olson Hall 250

## **Class support:**

Canvas link: canvas.ucdavis.edu/courses/1032952

Class email: beauregard.teaching@gmail.com

Instructor office hours: TW 11-12pm

Instructor OH location: Gold Room (SSH 1131)

Section	A01	A02
Day &	Thurs.	Thurs.
Time	10-11:40am	12:10-1:50pm

Location	Hutchison Hall 93

TA	Mitali Mathur
OH time	Thurs. 8-10am
OH location	SSH 136

**Class description:** Analysis of economic data to investigate key relationships emphasized in introductory micro and macro economics. Obtaining, transforming, displaying data; statistical analysis of economic data; basic univariate and multivariate regression analysis.

Course goals: This class aims to provide both a theoretical and applied understanding of how variables and the relationships between variables are visualized and analyzed in Economics. We will use standard statistical software *Stata* to read, clean, visualize, and analyze data. The class serves as a bridge between introductory statistics courses and more advanced courses in Econometrics (e.g. ECN 140, 141, 142). Students should expect to participate in lectures through knowledge check exercises and attend sections to gain familiarity with Stata.

Course materials: Students should purchase Prof. Colin Cameron's textbook *Analysis of Economics Data: An Introduction to Econometrics* (2022), available in print or Kindle app pdf download. Chapters 1-4 are available free here. Be aware that Equitable Access provides only a physical copy of the textbook. The tentative schedule of topics and weekly readings are listed below; you are <u>not</u> responsible for textbook material not covered in lecture. I will post my lecture slides ahead of each class; students can expect to download and annotate these for notes. I will make lecture recordings and my own annotated slides available after each class, but your <u>attendance</u> is <u>still critical</u> to ask clarifying questions.

Prerequisites: ECN 1A-B, Statistics 13 or 32, Math 16A-B

Registration: I cannot offer PTA codes for this class; please contact the registrar or advising directly.

**Stata:** The main statistical software for this class is unfortunately locked behind a paywall. However, many campus resources exist to access Stata for free. Our sections will be held in Hutchison Hall 93, a basement lab with Stata-equipped computers. The availability of this room outside of class can be checked here. Stata is also available weekdays in Shields 91 (see link for hours). After hours, Stata can be accessed remotely using the IET virtual lab, available here. Please contact me or your TA if you are having issues connecting to Stata. The final access option is purchasing a Stata license for your private machine, but you should not feel at all required to do this. If you do choose to purchase Stata (BE student 6-month  $\sim$ \$48), you can get started here.

## **Assignments and grading** (% of overall class grade):

- Knowledge checks (10% total): Chapter slide decks will end with a review exercise to complete and upload to Canvas by the end of the day. These will be completed as a class during lecture. Knowledge checks will be graded on effort not accuracy, but serve as good practice questions for exams. I will automatically drop up to two missing knowledge checks for the quarter.
- Homework (10% total): We will have four homework assignments to map concepts from lecture to actual data and applied problems. Problems requiring Stata will be demonstrated in discussion sections. Homework must be submitted as a single pdf and include all Stata output and code. All homework submissions will be due Sundays at 11:59pm through Canvas. Homework will be graded on completion, with full marks given for submissions that reasonably attempt all questions. No homework will be given during midterm week. Late homework is not accepted. If you must request an extension on a homework submission, please contact the instructor before the deadline.
- Stata quiz (20%): We will have a quiz Week 5 during discussion sections (7/24) on data processing, visualization, and analysis using Stata. You can expect questions similar to prevoius homework assignments. The quiz will be closed-note, but you will have access to all posted homework answer keys. The quiz cannot be taken on personal computers except through SDC.
- Midterm exam (25%) and final exam (35%): Our midterm will take place July 14th in class. Our final exam will take place July 30th in class. It is your responsibility to arrive on time on these days. No makeup time will be given on exams. Both exams will be cumulative and closed-book. No notecards or cheat-sheets are allowed for exams. If you will need to miss the midterm, you must notify me at least one week before the exam and give a valid reason for your absence. If I accept your petition to miss the midterm, the weight of the midterm in your class grade will be added to your final exam (60% total). Missing the final exam for any reason will result in either failure of the class or an incomplete ("I") grade with valid justification.

Regrading policy: Scores for each exam will be posted on Canvas within one week of the exam date. In addition, your exam pdf and the grading rubric for each question will be available on Gradescope with points earned/lost. If you feel you were graded incorrectly on one or more questions, you will have one week from when exam scores are released to submit a regrade request on Gradescope with justification for points back. It is then up to the instructor and TAs whether points will be returned. If necessary, I reserve the right to make the final decision over the allocation of points back. No regrade requests can be made after the one-week window elapses. Regraded exam questions are considered holistically.

**Final grades:** Any curving or rescaling of the grade distribution for this class will not be done until all assignments are submitted and evaluated. There is no hard limit on the distribution of grades in this class, but I expect the class average to fall between 80-85%. Prior to all assignments being graded, however, I cannot provide intuition as to the letter grade associated with any percentage grade. Instead, I encourage all students to compute their z-score following exams as a signal of their performance in the class: a positive z-score would indicate you are outperforming the average, while a negative z-score would suggest you are falling behind.

**Special accommodations:** If you have any form of disability, difficulty understanding English, or other extenuating circumstance you feel will prevent you from doing your best in this class, please meet with me during the first week of class to discuss appropriate arrangements. Any student registered to take their exams through SDC should expect to do so. Students taking the midterm and/or final exam through SDC will be provided a non-scientific calculator by default. Students taking the Stata quiz through SDC should expect to purchase a copy of Stata (BE) software for their personal computer.

**Cheating:** I have a zero tolerance policy for academic dishonesty. This includes but is not limited to: cheating on exams, submitting work from another student as your own, submitting work from an external source without proper citation, and submitting work produced by generative AI (e.g. ChatGPT). If I find you have engaged in any form of academic misconduct on any assignment or exam, you will receive a zero for that assignment or exam. Cheating includes use of personal electronic devices or talking between students during exams. I fully reserve the right to submit instances of cheating to student judicial affairs for review and discipline. Please review the UC Davis Code of Academic Conduct here.

Class culture: My class is built on a foundation of mutual respect and professional courtesy. All individuals should feel welcome, regardless of their age, sex, gender identity, race, ethnicity, national origin, immigration status, sexual orientation, religious beliefs, socioeconomic status, or disability status. Economics and academia more broadly are enriched through their embrace of diverse perspectives, ideas, and backgrounds. Additional university resources for issues of equity and inclusion can be found here. A link to student health and counseling services can be found here. If you feel you have experienced any form of discrimination in my class, please report the matter to me or use the link above.

Course schedule: Broadly, this class is broken down into four main components:

(a) Introduction: what we can do with data

(b) Univariate analysis: analysis of a single variable (ch. 1-4)

(c) Bivariate analysis: the relationship between two variables (ch. 5-9)

(d) Multivariate analysis: the relationship(s) between several variables (ch. 10-15)

A tentative schedule of topics and associated textbook chapters for each week are below:

Week 1: Monday June 23rd

lecture: descriptive statistics; data visualization: chapters 1+2

section: hw 1 examples hw 1 due 6/29 at 11:59pm

Week 2: Monday June 30th

lecture: the sample mean; univariate inference; bivariate date: *chapters* 3+4+5

section: hw 2 examples hw 2 due 7/6 at 11:59pm

Week 3: Monday July 7th

lecture: the least-squares estimator; bivariate inference; bivariate practice: chapters 6+7+8

section: hw 3 examples hw 3 due 7/13 at 11:59pm

Week 4: Monday July 14th

**midterm 7/14** ch. 1-7

lecture: data transformations for bivariate regressions; multiple regression: chapters 9+10

section: midterm recap

Week 5: Monday July 21st

lecture: multivariate inference; indicator variables: chapters 11+12+14

section: stata quiz

hw 4 due 7/27 at 11:59pm

Week 6: Monday July 28th

lecture: data transformations for multivariate regressions: chapter 15

final exam **7/30** ch. 1-7; 9-12; 14-15

section: canceled

no hw due