

University of Colorado Boulder

**Econ 4848-001 – Applied Econometrics
Fall 2026**

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Lectures: Tuesday and Thursday, 9:30-10:45am ECON 119

Office hours: Tuesday and Thursday 11:00am-12:30pm (and as need be – just ask!)

Course Description: This course will develop your ability to organize, analyze and interpret real-world data – skills that are growing increasingly important and valuable in industry, government, and academic settings. We will be using a very hands-on learning approach with Stata as our tool for empirical analysis; however, this is not a how-to course on Stata. Rather, the objective of the course is to learn how to conduct rigorous econometric analysis and interpretation using modern statistical software. Course enrollment is contingent on Econ 3818 (or equivalent) as a prerequisite. Students interested in more theoretical foundations of econometrics should consider Econ 4818 as a complementary course.

Course Organization: The delivery of course material will consist of lectures and hands-on lab work with Stata. The typical class day will consist of lecture, followed by in-class work on Stata and then discussion to tie the lecture to the hands-on work. There will be one midterm exam covering material from the first half of the class, along with a comprehensive final exam. Canvas will be the main point of communication.

Textbooks: There is no required textbook, however I provide all my notes ahead of class on Canvas. One nice aspect of using Stata is that there is a wealth of online material. For example, see <https://grodri.github.io/stata/tutorial.pdf> or alternatively <https://stats.idre.ucla.edu/stata/modules/>. While I'm happy to meet and discuss issues related to Stata syntax and coding, you'll often find that a quick internet search will get you the answer faster than trying to track me down. For any question you might have, someone else has asked and had it answered. If you drop into zoom office hours and I say LMGTFY, you're doing it wrong.

Software: You will need to purchase your own copy of Stata (Stata is available in the Department of Economics basement computer lab, but you'll probably want your own copy). The recommended version is Stata BE which is available through CU GradPlan for \$48 dollars for a six-month license (see <https://www.stata.com/order/new/edu/gradplans/student-pricing/> for more detail).

Teaching Assistant: John Gorman (john.gorman@colorado.edu) will be the Teaching Assistant for our course. You should view John as an excellent resource for help on homework, the research project, and general assistance with Stata. Office hours will be posted on Canvas and noted the first day of class.

Grading:

Class Participation	10%
Problem Sets	10%
Midterm Exam	25%
Final Exam	35%
Research Project	20%

Class Participation and Attendance: Because the best way to learn applied econometrics is to actually do it, it will be assumed that all students will be in attendance every day. That said, I will be enforcing the administrative drop rule for the first week of class, so be there in one way, shape, or form, or get booted. Participation will constitute 10% of your final grade. To facilitate and track participation and attendance, we will be using the Top Hat (www.tophat.com) classroom response system (which I've used for several years now). You will be able to submit answers to in-class questions and discussion via your computer.

You can visit <https://support.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide> for the Student Quick Start Guide which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up and running on the system. An email invitation will also be sent to your email account. Top Hat will require a subscription. There are three options to choose from (if you're not using it for other CU classes, just go with the 4 month/1 semester option):

- \$35 for 4 months of unlimited access
- \$58 for 12 months of unlimited access
- \$96 for 4 years of unlimited access

Problem Sets: There will be a total of 5 problem sets assigned during the semester. You should anticipate working with a partner and turn in a single document. The problem sets will be a mix of analysis in Stata and interpretation.

Midterm and Final Exams: The midterm will occur in-class roughly mid-October, with the final exam taking place on finals week on Monday Dec 7 at 1:30-4:00PM. The midterm will cover material up through bivariate regression analysis, while the final will be comprehensive. If the midterm exam is missed due to an excused absence, there will be no make-up – rather the weight for the midterm will be reallocated to the other graded components.

Research Project: A key objective of this course is to train you to be able to conduct and understand rigorous econometric analysis. As such, the research project will consist of original econometric analysis on a topic of the student's choosing. You may work with up to two other students. In early November, we will use a week of class-time for

individual meetings to discuss your research topic. The final two days of class will consist of oral defenses by each team. The final research paper will be roughly 6 pages in length, and is due the last day of classes, Thursday December 3rd. More details to come.

Tentative Schedule

Topics subject to change depending on interest and time constraints.

Week 1 8/17-8/21:	Introduction to applied econometrics
Week 2 8/24-8/28:	Hello STATA
Week 3 8/31-9/4:	Getting to know your data
Week 4 9/7-9/11:	Summary statistics
Week 5 9/14-9/18:	Categorical data
Week 6 9/21-9/25:	Hypothesis Testing
Week 7 9/28-10/2:	Bivariate Regression
Week 8 10/5-10/9:	Bivariate Regression
Week 9 10/12-10/16:	Multivariate Regression (Midterm 10/15 - tentative)
Week 10 10/19-10/23:	Omitted Variable Bias and Research Design
Week 11 10/26-10/30:	Dummy Variables and Interactions
Week 12 11/2-11/6:	Individual research project meetings
Week 13 11/9-11/13:	Binary dependent variables
Week 14 11/16-11/20:	Fixed effects, difference-in-differences
Week 15 11/23-11/27:	Fall Break!
Week 16 11/30-12/24:	In-class presentations of research project
Final Exam 12/7:	1:30-4:00p, in usual classroom

Important Stuff

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the [Honor Code](#). Violations of the Honor Code may include but are not limited to: plagiarism (including use of paper writing services or technology [such as essay bots]), cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. Understanding the course's syllabus is a vital part of adhering to the Honor Code.

All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution: StudentConduct@colorado.edu. Students found responsible for violating the Honor Code will be assigned resolution outcomes from Student Conduct & Conflict Resolution and will be subject to academic sanctions from the faculty member. Visit [Honor Code](#) for more information on the academic integrity policy.

Accommodation for Disabilities, Temporary Medical Conditions, and Medical Isolation

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or DSinfo@colorado.edu for further assistance. If you have a temporary medical condition, see [Temporary Medical Conditions](#) on the Disability Services website.

If you have a temporary illness, injury or required medical isolation for which you require adjustment, a simple email will suffice.

Accommodation for Religious Obligations

Instructional faculty members must make every reasonable effort to accommodate all students who have conflicts with scheduled exams, assignment deadlines or required attendance due to a religious observance. Whenever possible, students must notify the instructional faculty member at least two weeks in advance of the expected exam, assignment deadline, or attendance conflict to request an accommodation for religious observance. If the start date of the course is less than two weeks before the date of requested accommodation, students must notify the instructional faculty member on the start date of the course. See the Student Academic Accommodations for Religious Observances Policy for more information.

Preferred Student Names and Pronouns

CU Boulder recognizes that students' legal information does not always align with how they identify. If you wish to have a name other than your legal name appear on your instructors' class rosters and in Canvas, or if you wish to choose pronouns to appear on your instructors' class rosters and in Canvas, visit the Registrar's website for instructions on how to change your personal information in university systems.

Classroom Behavior

Students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote, or online. Failure to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, marital status, political affiliation, or political philosophy.

Additional classroom behavior information

- [Student Classroom and Course-Related Behavior Policy](#).
- [Student Code of Conduct](#).
- [Office of Institutional Equity and Compliance](#).

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

CU Boulder is committed to fostering a productive and welcoming learning, working, and living environment. University policy prohibits [protected-class](#) discrimination and harassment, sexual misconduct (harassment, exploitation, and assault), intimate partner abuse (dating or domestic violence), stalking, and related retaliation by or against members of our community on- or off-campus. Denial of an approved accommodation for disability, religious observance, or pregnancy or pregnancy related medical conditions may be discriminatory.

The [Office of Institutional Equity and Compliance \(OIEC\)](#) addresses these concerns, and individuals who have been subjected to misconduct can contact OIEC at 303-492-2127 or email OIEC@colorado.edu. Information about university policies, [OIEC reporting options](#), and [OIEC support resources](#) including confidential services can be found on the [OIEC website](#).

Faculty and graduate instructors are required to inform OIEC when someone discloses misconduct regardless of when or where it occurred. This is to ensure that those impacted receive outreach from OIEC about resolution options and support resources. To learn more about reporting and support options for a variety of concerns, visit the [Don't Ignore It page](#).

Mental Health and Wellness

The University of Colorado Boulder is committed to supporting students' mental health and overall wellbeing. If personal, academic, or emotional challenges are affecting your wellbeing or success, [Counseling and Psychiatric Services \(CAPS\)](#), is here to help. CAPS offers counseling, referrals, psychiatric care, crisis support, and much more. Visit CAPS in the C4C, or call (303) 492-2277, 24/7.