

Syllabus

EC 4380: Econometrics

Spring 2026

Scott Hiller

Professor: Scott Hiller

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Office Hours: T 1:00-2:00, W 12:00-1:00 (virtually as needed), and by appointment individually
Sign up for office hours (not Tuesday) at: <https://calendly.com/rhiller-1>

Class Meetings: Class meets twice a week. Friday will be for lecture only. Tuesday will be divided between lecture and lab, as needed, where we will apply our ideas practically.

Course Description

Econometrics is the practice of applying statistical methods to data in order to test economic theories, to inform government and private policy makers, and to predict economic time series. In this course, we will learn how to measure relationships between economic variables using rigorous econometric techniques. By the end of the semester, you will have the ability to statistically confront the bulk of economic issues using econometrics.

Text and Prerequisites

Text: *Introduction to Econometrics* by Gary Koop.

Prerequisites: EC 11, EC 12, and competency in basic methods of calculus, probability, and statistics (EC 278).

Course Requirements

Grades will be based on two written exams, lab/homework assignments, a project, and a final exam.

Component	Weight
Labs/Homework	20%
Project	20%
Exam 1 (Feb 24)	20%
Exam 2 (Apr 7)	20%
Final Exam (May 5, 8 AM)	20%

- Lab assignments are due every Friday at the very beginning of class.
- Late assignments will be penalized at the rate of 10% per day, including weekends.
- You may work together on labs, but work must be your own. You may not share Stata output; duplicate answers will receive a zero.
- All exams are cumulative. Makeup exams should be taken **BEFORE** the scheduled date.

Computer Labs

We will use **Stata** via the cloud. You must bring a laptop to class every Tuesday. Repetition and practice are key to understanding econometrics!

Project Deadlines

You will complete an independent empirical project including a research question, literature review, data analysis, and final paper.

Tentative Project Deadlines	Due Date
Submit project topic proposal	01/28
Literature review	02/25
Data sources & Refined project topic	03/03
Data set (Finalized)	03/17
Regression model and preliminary results	03/31
Rough draft of paper	04/14
University Research Symposium	TBA
Final paper due	05/03

Topics List

Topic	Readings
Introduction	Ch. 1-2
Simple Regression Model & OLS Properties	Ch. 3
Multiple Regression (Omitted variables, Multicollinearity)	Ch. 4
Hypothesis testing	Ch. 4
Heteroskedasticity	Ch. 5
Autocorrelation	Ch. 5
Instrumental variables, Measurement error	Ch. 5
Time series data	Ch. 6-7
Panel data	Ch. 8

Academic Integrity & Accommodations

All students must conform to the university code of academic honesty. Cheating results in a failing grade. If you have a documented disability requiring accommodations, please contact the Office of Academic and Disability Support Services and notify me within the first two weeks.

AI statement

LLMs are a powerful tool that can help students to learn if used properly. If you use them to replace your work and learning, you will have worse outcomes in class as this will be very clear on the exams. If you use LLMs for this class it's best to use them to ask you questions and help stimulate your thought process. Feel free to ask questions about this as you would anything else in the class.

For your paper an LLM can do most of the basic econometrics work you would need to do now. Of course I can detect this, but more than that I would suggest that's not the point of this class. Much like you learned the basic math a calculator can do, you should learn and struggle with how to do the actual econometrics needed for this class. This will allow you to understand what is done in statistical work, why, and whether something is done correctly or needs improvement. It allows you to add your own insight to the work where you cannot if you do not understand it. I'm suggesting you should learn this for your own benefit, just like anything else in your college experience.