Version: January 18, 2022 Fall 2021
EC200: Econometrics and Applications

Syllabus

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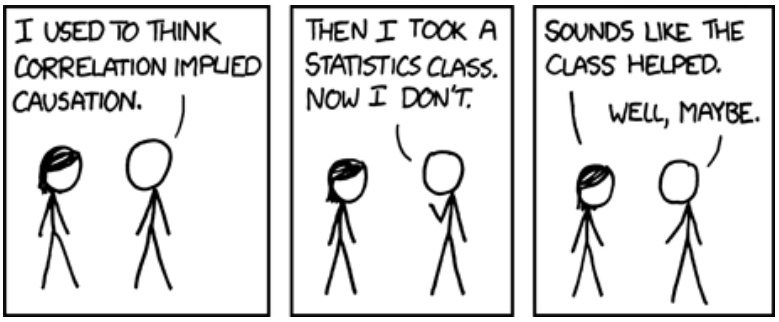
Meetings	TTh 2:50–4:05	Lafayette L407
Office hours:	T 4:10–5:10pm, W 2–3pm	or schedule an appointment



Course description

Credits: 3

This course will provide a theoretical and practical background in basic econometric techniques. We will review probability and statistics before covering classical linear regression with two or more variables, estimation and hypothesis testing, and violations of classical assumptions. EC200 is a challenging course. If you are not interested in taking a challenging course, you should take a different course. The prerequisites are EC170, EC171, and EC172.

The course will combine lectures, discussion, and lots of practice. Learning econometrics requires a healthy blend of theory and practice, so you will complete problem sets throughout the semester, and you will design and and write a short research paper that applies some of the techniques we've learned about to real-world data. We won't have enough course time to cover all the Stata preparation you'll need, but I'll cover the basics and you'll have to rely on other resources to figure out the rest.

Learning objectives:

- To understand and apply foundational tools in econometric theory
- To use econometric tools and statistical packages (Stata) to analyze real-world data and interpret findings
- To formulate, assess, and answer economic questions by selecting and applying appropriate econometric techniques

Required materials

- **Textbook:** Stock, James H. and Mark W. Watson. *Introduction to Econometrics*, 3rd edition (updated), Pearson. ISBN-13: 978-0-13-348687-2.
  - **I recommend buying cheaper used copies online ($\sim$ $20)** I am using the "updated" edition. International is fine, but your problems/solutions may differ from mine. For exercises, I will provide the full text of problems.
  - There is a newer, 4th edition available. Do not purchase this!
  - We are **not** using any digital Pearson tools.
- **Stata**: We will use Stata extensively in this course, including outside of class. It is compatible with Windows/MacOS/Linux. You should download a copy at https://www.uvm.edu/software/. Note that there is a link to a pdf file that contains the licensing information.

Course components

Embarking on the week

If you come into class without preparing, things will feel bad! Check the calendar to see what you need to do. Before we start on a new unit, you should always read the associated chapters. There is usually an assigned or optional lecture video to get your prepared. If assigned, you'll also need to earn an 80% on that week's lecture quiz.

Our class meetings will be a combination of lecture, practice, and labs.

We will not have labs every week, but when we do, they will be on Wednesdays. During labs you should bring a laptop to class. I will demo some concepts and commands and give you time to practice. A final version of your lab will be due one week later.

Deadlines

- With the exception of a handful of research paper assignments, deadlines are at **2:50pm**.
  - As a general rule, problem sets are due on Thursdays at 2:50pm. Video quizzes are usually due Tuesdays, and final labs bounce around depending on the schedule.
- Please submit all assignments through Blackboard. If you encounter technical issues, e-mail is a fine last resort.
- Late problem sets and labs will be penalized 10% per day. Late video quizzes are not accepted.
- Regarding **research papers intermediate elements *only***, I have an *"extensions for all"* policy
  - If you need an extension, request it by e-mail **before** the deadline and provide a proposed new deadline.
  - Some assignments build on previous ones, so be careful when requesting that you don't put yourself in a tricky position. I don't need to know why you need the extension.
  - If you exceed your revised deadline (or you request an extension *after* the due date), then I will start applying the 10% deduction per day.
  - This does not apply to the final submission, which remains fixed.

Class engagement and attendance

This is a challenging course, and you'll get the most out of it if you engage with the material both during and outside of class. You are responsible for finding a classmate or checking Blackboard for any content you may miss during class.

o What if I'm sick?

Please stay home! I can stream you in to class if you give me a heads up.

Grading

Assignment weights

Assignment	Percent
Attendance	5%
Lecture video quizzes	4%
Labs	8%
Problem sets	8%
Exams (3 quizzes at 5%, 15%, 15%)	35%
Research paper	40%

*You can miss **two** classes without any penalty*

Grading distribution

Range	Grade
93.0 - 100.0	A/A+
90.0 - 92.99	A-
87.0 - 89.99	B+
83.0 - 86.99	B
80.0 - 82.99	B-
77.0 - 79.99	C+
73.0 - 76.99	C
70.0 - 72.99	C-
67.0 - 69.99	D+
63.0 - 66.99	D
$<$ 60.0	F

- I determine grades by a threshold - 93.01 is an A, and 92.97 is an A-. In cases of very near misses of higher grades, however, I will take into account class participation/attendance.
- I will never curve quizzes down, but I may curve them up if the median grade is less than a B-.

Quizzes

There are two unit exams (15% each) and one stats exam (5%). All exams are in-class and open note, but computers/tablets/phones are not permitted.

Quizzes are not explicitly cumulative, but you'll need to master skills from earlier chapters to tackle the newer material.

FAQ

1. *I don't remember ANYTHING from statistics. Will I be able to pass this class?* The stronger your stats background, the more useful you'll find this class. Whether or not you can recall the formula for a one-sample hypothesis test should have no bearing on your ability to succeed (you can always look it up!) But to have a sense of what big concepts mean will be very important. We'll review together at the beginning of the term.
2. *I am sick and need to miss class. Will I lose points? Do I need to tell you?* You don't need to let me know if you will be missing class. If you need an extension, though, I will need to know that in advance of the deadline.
3. *Do I really need to buy a textbook?* Yes. 3rd (updated edition), used.
4. Do I need a computer for this class? You will need a computer for any work with Stata. I *think* there is a way to get Stata to run on a Chromebook, but I can provide you with roughly zero technical support for setting that up!

1. *Can I use open-source, glorious, R?* Sure. But I have many caveats and warnings. (1) You will need to to be comfortable reading and interpreting Stata output in order to be successful on exams. (2) I will be teaching in Stata exclusively, and the technical support I will be able to provide is limited.

I am in college and having some problems

Check out available resources.

Student responsibilities and rights

Student learning accommodations In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact ACCESS, the office of Disability Services on campus. ACCESS works with students to create reasonable and appropriate accommodations via an accommodation letter to their professors as early as possible each semester.

Contact ACCESS: A170 Living/Learning Center; 802-656-7753; access@uvm.edu;

UVM's policy on disability certification and student support

Academic integrity: Do not cheat, and do not plagiarize. Although you are permitted to work together on problem sets and labs, the work you submit should be *your own*. This policy addresses plagiarism, fabrication, collusion, and cheating:

Grade Appeals If you would like to contest a grade, please follow the procedures outlined in this policy.

Code of Student Rights and Responsibilities

FERPA Rights Disclosure The purpose of this policy is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974.