Economics 2311
Empirical Methods in Economics I
Oak Hall, Room 308
TuTh, 9:30 AM - 10:45 PM

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Course Description: Econ 2311 is an introductory course in econometrics. Econometrics is the study of economic models, economic data, and statistics. For the most part, we are interested in "taking models to the data" for causal inference and prediction. We begin with a review of fundamental statistical concepts: probability distribution functions, estimators, sampling distributions, and hypothesis testing. We then focus on simple and multivariate regression models to analyze economic data and answer economic questions. In addition, there will be a major focus on empirical applications using statistical software.

Prerequisites: ECON 1200 or both ECON 1201 and 1202; and MATH 1071Q or 1110Q or 1131Q; and STAT 1000Q or 1100Q.

Text: *Introductory Econometrics: A Modern Approach*, 6th Edition plus MindTap.
Author: Jeffrey Wooldridge
ISBN-13: 9781337127141

Mastering 'Metrics: The Path from Cause to Effect by Joshua D. Angrist and Jörn-Steffen Pischke is a useful text for learning about causal applied econometrics at the undergraduate level. This book is not required, but will be helpful if you decide to pursue applied econometric research in the future. The authors also have a more in-depth, technical book on the same topics titled *Mostly Harmless Econometrics: An Empiricist's Companion*.

Software: You will need to use a statistical software package to complete empirical exercises. I prefer to use Stata and R. I will demonstrate how to use Stata in class, however you are welcome to use other statistical software (R, SAS, SPSS, GAUSS, etc. Microsoft Excel is not acceptable).

Stata is available on Skybox. R is free statistical software that is rising in popularity among industry and academics. The easiest way to use R is by installing R-Studio which is a free, user-friendly integrated development environment for R.

Grade Distribution:

Homework	10%
Empirical Exercises	20%
Probability and Statistics Quiz	10%
Midterm Exam	30%
Final Exam	30%

Letter Grade Distribution:

$\geq$ 93.00	A	73.00 - 76.99	C
90.00 - 92.99	A-	70.00 - 72.99	C-
87.00 - 89.99	B+	67.00 - 69.99	D+
83.00 - 86.99	B	63.00 - 66.99	D
80.00 - 82.99	B-	60.00 - 62.99	D-
77.00 - 79.99	C+	$\leq$ 59.99	F

I will generally follow the above grading outline, however, I reserve the right to make adjustments as necessary. You will be notified if adjustments are made.

Course Policies:

- **General**

  - I expect you to prepare for each class meeting in advance. At the least, this means skimming the text for the major topics that will be covered in class. You should also review the slides and textbook shortly after class to reinforce what you learned.

  - Exams are closed book, closed notes.

  - Cell phones should be on silent or vibrate during class. If you need to make/receive a phone call or text message, do it outside the classroom.

  - Laptops and tablet devices may **only** be used for note-taking. However, I highly recommend "old-fashioned" note-taking with a pen/pencil and paper and transferring your notes to any of your devices **after** class.

- **Assignments**

  - I encourage you to discuss the homework and computer assignments with each other, **however all of your submitted work must be your own.**

  - No makeups will be given for missed homework or empirical exercises.

  - While not required, the problems at the end of each chapter are an excellent source of review material and many of the solutions are available online.

- **Attendance and Absences**

  - Attendance is not required for this course, but it is **strongly recommended**. The textbook is a complement to the lectures, not a substitute.

  - Student athletes and others who will miss class due to official university events must provide me with a list of dates in advance of the event in order to make special arrangements.

– If you have a conflict with the quiz or midterm exam, contact me in advance. If you are sick or absent for another reason, please contact me as soon as possible. I will work with you to reschedule.

Student Responsibilities:

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. This section provides a brief overview to important standards,policies and resources.

Student Code

You are responsible for acting in accordance with the University of Connecticut's Student Code. Review and become familiar with these expectations. In particular, make sure you have read the section that applies to you on Academic Integrity

Cheating and plagiarism are taken very seriously at the University of Connecticut. As a student, it is your responsibility to avoid plagiarism. If you need more information about the subject of plagiarism, use the following resources:

- Plagiarism: How to Recognize it and How to Avoid it

- University of Connecticut Libraries' Student Instruction (includes research, citing, and writing resources)

Students with Disabilities

Students needing special accommodations should work with the University's Center for Students with Disabilities (CSD). You may contact CSD by calling (860) 486-2020 or by emailing csd@uconn.edu. If your request for accommodation is approved, CSD will send an accommodation letter directly to your instructor(s) so that special arrangements can be made. (Note: Student requests for accommodation must be filed each semester.)

Final Exam

In accordance with UConn policy, students are required to be available for their final exam and/or complete any assessment during the time stated. If you have a conflict with this time you must obtain official permission to schedule a make-up exam with the Office of Student Support and Advocacy (OSSA). If permission is granted, OSSA will notify the instructor. Please note that vacations, previously purchased tickets or reservations, graduations, social events, misreading the assessment schedule, and oversleeping are not viable reasons for rescheduling a final.

Tentative Course Outline:
You should (lightly) read the assigned material before class each week. After the lecture, you should read the material in the textbook again to reinforce the material covered in the lecture.

Content
• Introduction and review of statistics • Reading assignment: Chapter 1, Appendices A and B
• Simple (bivariate) linear regression • Reading assignment: Chapters 1 & 2
• Multiple linear regression: Estimation, Inference, and Binary (Dummy) variables • Reading assignment: Chapters 3, 4, 6, & 7
• Heteroskedasticity • Reading assignment: Chapter 8
• Instrumental Variables and Two-Stage Least Squares • Reading assignment: Chapter 15
• Simultaneous Equation Models • Reading assignment: Chapter 16
• Special topics (time permitting) • Introduction to causal methods: randomized controlled trials, difference-in-differences (DiD), instrumental variables, regression discontinuity