
EC 286

Econometrics

Overview

This course introduces the process and methods of econometrics. Econometrics concerns the use of economic data to estimate economic relationships, statistically evaluate hypotheses, and to forecast. In particular, we will focus on regression analysis and identify the settings in which regression analysis can yield unbiased estimates of causal relationships. By the end of this course, students should be able to understand and apply the methods taught in this course to empirical research questions.

Required Textbook

Introduction to Econometrics
Stock and Watson
Third Edition
ISBN: 0-13-348687-7

Additional Readings may be placed on reserve in the library or posted to PWeb.

Evaluation

Grades in this class will be based on problem sets, 1 midterm exam, 1 research paper, and one final exam. In addition, you are expected to actively participate in class. Grades will be weighted as follows:

- 20% - Homework
- 20% - Midterm
- 15% - Research Paper Components and Presentation
- 15% - Research Paper – Final Draft
- 30% - Final

Time Expectations

Students should expect to spend 2 hours reading, working problems, studying, and writing their research paper outside of class for each hour of class time.

Spring 2022
M,W 8:00-9:50 AM
HSSC S2314
Instructor: Logan Lee
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Office: HSSC S3348
Office Hours: Monday: 3:00-4:00 PM
Tuesday: 8:00-9:00 AM
Wednesday: 2:00-3:00 PM
Friday: 10:00-11:00 AM
and by appointment
Mentor: Simon Hodson
Mentor e-mail: hodsonsi@grinnell.edu

Important Dates

February 9th

Research Paper Topic Due

February 23rd

Data for Research Paper Due

March 9th

Paper Introduction and Literature Review Due

March 16th

Midterm Exam

March 21st – April 1st

Spring Break

April 6th

Data and Empirical Model Paper Section Due

April 27th

First Draft of Paper Due

May 11th

Final Paper Due

May 18th (2:00-5:00)

Final Exam

Problem Sets

Problems sets are due at the beginning of class on their listed due date. No late assignments will be accepted. You must turn in a physical copy of each problem set in order to receive credit; e-mail delivery of assignments will not be accepted. Working with others on homework assignments is encouraged. The worst score from the homework assignments will be automatically dropped. This is done to accommodate any unforeseen absences and no additional considerations will be given.

Exams

There will be one midterm and one final in this class. Each exam will contain a series of short answer questions. Students are responsible for all material covered in class and in the assigned readings. Students unable to take a midterm must provide proper documentation to the instructor prior to the exam. In the case of a missed midterm due to unanticipated emergency situations, the student will be allowed to put the weight of the missed exam on the final, provided notification is received as soon as possible and there is verification of the emergency.

Testing Procedures

The same procedure will apply during all exams. You will be allowed one non-programmable calculator and a writing implement. Minor items such as drinks and pencil cases are also allowed. Nothing else will be allowed on your desks during the exams. Please close your backpacks for the duration of the exam.

Research Paper

During the course you are expected to write an empirical research paper using data and the tools that you will learn in this course to answer a specific research question. The topic of this paper is up to you, but it must include the use of regression analysis. You are encouraged to work with another student in the course on this project. If you choose to have a partner, the expectations for the paper will be the same, however, at the end of the project, you will be expected to turn in a one paragraph description of the work that both you and your partner put into the project. I reserve the right to give different grades to each partner if one partner did a significant majority of the work. Throughout the term, you will be required to submit components of the research paper. In addition, at the end of the term you will present your paper to the class.

Students with Disabilities

I strive to create a fully inclusive classroom (digital or otherwise); thus, I welcome individual students to approach me about distinctive learning needs. In particular, I encourage students with disabilities to have a conversation with me and disclose how our classroom or course activities could impact the disability and what accommodations would be essential to you. You will also need to have a conversation about and provide documentation of your disability to the Coordinator for Disability Resources, John Hirschman, located on the 3rd floor of Goodnow Hall (x3089).

Academic Honesty

Grinnell College's Academic Honesty Policy is located in the Student Handbook available online at: <http://catalog.grinnell.edu/content.php?catoid=12&navoid=2537>. It is the College's expectation that students be aware of and meet the expectations expressed in this policy.

Religious Holidays

I encourage students who plan to observe holy days that coincide with class meetings or assignment due dates to consult with me in the first three weeks of classes so that we may reach a mutual understanding of how you can meet the terms of your religious observance and also the requirements for this course.

Tentative Schedule

Below is a schedule of topics and readings that we will cover in lecture. This schedule is subject to change given the pace of the class. All changes will be announced in class and posted on blackboard. Note that some of the topics will be based solely on lecture notes or other assigned readings not found in your textbook.

Dates	Topic	Readings
January 24-26	Introduction, Economics Questions and Data	Chapter 1
January 31- February 2	Probability, and Statistics Review Correlation and Causation, Endogeneity	Chapters 2 and 3 (skip 3.5 and 3.6)
February 9	Univariate Regression and Introduction to Stata	Stata Manual (Posted to PWeb), Chapter 4 (skip 4.5, 4.6)
February 14-16	Hypothesis Testing Confidence Intervals and Heteroscedasticity	Chapter 5 (skip 5.6)
February 21-23	Multivariate Regression Multicollinearity	Chapters 6 (skip 6.5) and 7 (skip 7.4-7.6)
February 28- March 2	Nonlinear Regression Functions	Chapter 8 (skip 8.1, 8.4)
March 7-9	Assessing Studies Based on Multiple Regression	Chapter 9 (skip 9.4), Antonovics et al. (2005)
March 14-16	Review and Midterm Exam	None
March 21-23	Spring Break	None
March 28-30	Spring Break	None
April 4-6	Panel Data Serial Correlation	Chapter 10, Lee (2019)
April 11-13	Binary Dependent Variables	Chapter 11 (skip 11.4)
April 18-20	Regression Discontinuity and Difference in Differences	Black (1999), Card and Krueger (1994)
April 25	IV Regressions	Chapter 12, Angrist (1990)
May 2-4	Research Paper Presentations	None
May 9-11	Research Paper Presentations and Review	None