Econ 482 is an upper division undergraduate course in applied econometrics. Econometrics is distinguished by the unification of economic theory and statistical methodology. It is concerned with estimating economic relationships, confronting economic theory with facts, and testing hypotheses involving economic behavior.

Specific topics addressed in this course include single and multiple variable regression analysis, hypothesis testing, model specification, dummy variables, heteroscedastic and serially correlated errors, and distributed lag models. Regression estimators and their properties are formally derived using calculus.

As a course in applied econometrics, we will frequently use these methods with world financial and economic data. Students will be introduced to statistical programming in STATA. Given the applied nature of much of the coursework, some mathematical, statistical, and computer proficiency will be required. Specifically, familiarity with algebra, differential calculus, statistics, and intermediate microeconomics is assumed.

Course Materials


Software: The computer program STATA will be used extensively in the course. A current version of STATA is available on the computers in Savery Hall (CSSCR). In case you prefer to purchase a copy of Stata follow the instructions at https://www.washington.edu/uware/stata/. Choose Intercooled STATA (Stata/IC), not Small STATA. Small STATA is not adequate for many of the applications we will consider. STATA contains an extensive online and embedded help facility.

Class website: You can access a copy of the syllabus, lecture slides, homeworks, etc. on the following homepage – https://catalyst.uw.edu/workspace/dkuenzel/39748/
Learning Goals

At the end of the course, you should

- be able to understand, interpret, and implement multiple regression and related statistical techniques,
- know the limitations and pitfalls of regression methods, and
- be able to write a focused explanation of the findings of a statistical investigation, clearly and concisely.

Grading

- Exam 1 (40%): The first exam is tentatively scheduled for Monday, October 28.
- Exam 2 (40%): The second exam is tentatively scheduled for Wednesday, December 4.
- Final econometric project (20%): you are required to complete an econometric project and submit a short paper (up to 5 pages) summarizing the results. Specific guidelines for the projected will be provided at a later date. Work on the final project may be done with other students (no more than 3 per group). The data and outline for a sample final project will be provided the week after the midterm exam. However, you are strongly encouraged to develop your own project.
- Problem Sets (0%): I will assign practice problems throughout the quarter. Although the problem set are neither collected nor graded, I highly recommend the problems as practice for the exams.
- I reserve the right to take class participation into account in determining final grades.

Make-up Exams:

Except for illness or another serious unexpected happening, there will not be any kind of make-up exams or deadline extension for the term paper. If you are not able to make it to an exam due to a serious reason, you have to contact me on the same day and explain what happened. In any case you will have to show proper valid documentation as soon as possible after the missed exam date, such as a doctor’s note.

Academic Honesty:

All work submitted, whether for exams or the final project, must be your own, original work submitted solely in this class. Cheating and plagiarism will not be tolerated. More detailed information on proper academic conduct is provided on the handout attached to this syllabus. The Department of Economics will follow university policy in case of academic dishonesty. These rules are spelled out at: http://www.washington.edu/uaa/advising/help/academichonesty
Tentative Course Schedule:

Week 1: September 25-27
  - Review Section: Review of Mathematical Statistics

Week 2: September 30-October 4
  - Review Section: Review of Mathematical Statistics

Week 3: October 7-11
  - Review Section: Review of Mathematical Statistics
  - Chapter 1: Simple Regression Analysis

Week 4: October 14-18
  - Chapter 2: Properties of Regression Coefficients and Hypothesis Testing

Week 5: October 21-25
  - Chapter 3: Multiple Regression Analysis

Week 6: October 28-November 1
  - October 28: Exam 1
  - Chapters 4 and 6: Model Specification

Week 7: November 4-7
  - Chapters 4 and 6: Model Specification
  - Chapter 5: Dummy Variables

Week 8: November 11-15
  - November 11: Veterans Day – no class
  - Chapter 5: Dummy Variables

Week 9: November 18-22
  - Chapter 7: Heteroscedasticity
  - Chapter 11: Time Series Data

Week 10: November 25-29
  - Chapter 11: Time Series Data
  - Chapter 12: Serial Correlation

Week 11: December 2-5
  - Chapter 12: Serial Correlation
  - December 4: Exam 2