## Introduction to Econometrics Autumn 2023

Instructor:	Yoon Choi	Lecture Time and Place:	TTH 3:30 PM $\sim$ 4:50 PM, GLD 322
Email:	lemineml@uw.edu	TA Section and Place:	W 3:30 PM $\sim$ 4:20 PM, SMI 205

## 1. Textbook:

- A.H. Studenmund, Using Econometrics: A Practical Guide, Pearson, 7th ed., 2017. Resources are available at here. (The 6th edition is acceptable.)
- Wooldridge, Jeffrey M., Introductory Econometrics: A Modern Approach, South-Western College Publishing, 7th edition. (The 6th edition or the 5th edition are acceptable.)
- 2. In-person OH: TTH 4:50  $\sim$  5:20 PM GLD 322 (subject to change)
- 3. **Required Software:** R(r-project.org) and Rstudio(rstudio.com) are required for this course. Both are available for free, and will be used throughtout this course.
- 4. Overall Course Description: Econ 382 is a course in economic statistics and 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 hypothesis involving economic behavior. Specific topics addressed in this course include mathematical statistics, single and multiple variable regression analysis, the Gauss-Markov Theorem, hypothesis testing, model specification, multicollinearity, dummy variable, heteroskedasticity. As a course in applied econometrics, we will frequently use these methods with real world financial and economic data. Students will be introduced to data and regression analysis in R. Given the applied nature of much of the coursework, some mathematical, statistical, and computer program proficiency will be assumed.
- 5. Student Learning Goals: Once you have finished this course, you will be able to
  - (i) Interpret and implement multiple regression and related statistical techniques
  - (ii) Identify the limitations and pitfalls of regression methods
  - (iii) Write a focused explanation of the findings of a statistical investigation, clearly and concisely.
- 6. **Prerequisite:** A minimum grade of 2.0 in Econ 300.

- Evaluation: Grading Policy: Problem sets (25%) Midterm1 (20%), Midterm2 (25%), Final (30%)
  - (a) **Problem Sets (25%):** Short problem sets will be assigned every other week, and are due at 11:59 PM PST on the following Tuesday. Solutions will be posted after the assignments are due for help studying.
  - (b) **Exams (75%)**: There will be three exams, two midterms and final. All tests will be conducted in-person unless there is other instruction by the department. They are all closed-book tests; no cheat sheet is allowed. You will only need a calculator for some of the questions on your tests. Graphing calculator is not allowed in any of the exams in this course. Your exams are collectively worth 75% of your grade.
- 8. Attendance Policy: Attendance is recommended whenever possible. No late assignments will be accepted.
- 9. Access and Accommodations: Your experience in this class is important to me. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you have already established accommodations with Disability Resources for Students (DRS), please activate your accommodations via myDRS so we can discuss how they will be implemented in this course.

If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), contact DRS directly to set up an Access Plan. DRS facilitates the interactive process that establishes reasonable accommodations. Contact DRS or 206-543-8924.

- 10. **Religious Accommodations:** Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at Religious Accommodations Policy . Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form.
- 11. Academic Misconduct: All students are expected to know and to abide by the University's Academic Misconduct policies as defined at Academic misconduct. In particular, while you are encouraged to study with each other, all assignments for this course must be completed on one's own. Exams are closed-book so it must be completed without accessing outside information, whether from "cheatsheets," cellphones, computers or other sources. Failure to abide by these policies is likely to result in failing this course, and may result in further sanctions as described by the policy. If I believe you have cheated on an assignment, you will receive a "zero" grade for that assignment.

## 12. Tentative Schedule

Week	Learning Subjects or plans	Readings
9/28	Introduction	Syllabus, Ch. 1
10/3,  10/5	Statistical Principles	Ch.17
10/10,  10/12	Ordinary Least Squares I	Ch.2
10/17	Ordinary Least Squares II	Ch.3
10/19	Classical Regression Model	Ch.4
10/24	Classical Regression Model	Ch.4
10/26	Midterm 1	
10/31, 11/2	Hypothesis Testing	Ch.5
11/7	Model Specification	Ch.6
11/9	Model Specification	Ch. 7-8
11/14, 11/16	Heteroskedasticity	Ch. 10
11/21	Midterm 2	
11/23	Thanksgiving, No class	
11/28, 11/30	Dummy Variable	
12/5	Review	
12/7	Final	