Advanced Econometrics II

Spring 2018

Course Time: Tuesday 7:10-8:50 PM in Nanqiang2-410 (南强二 410), and Friday 10:00-11:50 AM in Lianxing-204 (联兴楼 204)

Webpage: https://wsong22.github.io/teaching/advanced_econometrics_spring_2018

Office: Economics Building A424

Office Hours: Wednesday 2:00-4:00 PM, or by appointment

Instructor: Wei Song (wsong@xmu.edu.cn)

TA: Onwachukwu Chinedu Increase (Increasechinedu@gmail.com)

Course Overview

This course is designed for International Economics Ph.D. and Master students at WISE, XMU. The basic methods of modern econometrics are covered. Attention will be given both to econometric theory and the problems that arise in empirical studies. We begin with an extended discussion of univariate and multivariate regression analysis. Later in the semester, we will get to learn more advanced topics, such as instrumental variables, limited dependent variable methods, and the application of regression models to time series and panel data.

Prerequisites

The course prerequisite is Advanced Econometrics I (probability and statistics). Familiarity with linear algebra and multivariate calculus is assumed.

Textbook

Our textbook is: Wooldridge, Jeffrey (2015). *Introductory Econometrics: A Modern Approach*. South-western College Publishers, 6th Edition. (The China Edition is published by Tsinghua University Press but with some missing chapters).

References

Introduction to Econometrics by Stock and Watson, *Econometric Analysis* by William H. Greene, *Econometrics* by Fumio Hayashi, and *Mostly Harmless Econometrics* by Angrist and Pischke.

A well-written supplementary manuscript can be found on the webpage of Prof. Bruce Hansen at the University of Wisconsin-Madison: https://www.ssc.wisc.edu/~bhansen/econometrics/.

Evaluation

Your overall grade for the course will be based on the following components:

Final Exam	40%
Midterm Exam	30%
Assignments	15%
In-class Quiz	15%

Assignments

There will be biweekly assignments with two parts. The first part contains conceptual questions and will not be graded. The second part contains empirical questions and will be graded. The course statistical software is R (or Stata, TBD). For full credit, assignments must be submitted before the class on the day they are due. Late assignments may be submitted (under my office door) up to 24 hours after the deadline, but will receive a 50% deduction. After that point, late assignments will no longer be accepted for any reason. To receive full credit, you must submit your code for the empirical questions. You are encouraged to form a study group with your classmates, but you must writ up your answers independently. Problem sets with identical answers will not be accepted.

In-class Quiz

There will be a weekly in-class quiz. No make-up quiz will be given for any reason. The two lowest in-class quiz scores of each student will be dropped when calculating grades.

Course Outline (Tentative)

We will cover the following topics in this course:

1. Overview of Econometrics (Chapter 1)
2. Statistics Review (Appendix B and C)
3. Univariate Regression (Chapter 2)
4. Multivariate Regression (Chapters 3-6)
5. Regression with Dummy Variables (Chapter 7)
6. Heteroskedasticity (Chapter 8)
7. Time Series (Chapter 10)
8. Panel Data (Chapters 13-14)
9. Instrumental Variables (Chapter 15)
10. Limited Dependent Variables (Chapter 17 Section 1)