

**Econometric Theory and Practice (Econ 482)**  
**Spring 2025, University of Washington**

**Instructor:** Chang-Jin Kim (Sav 353)

**Class Hours:** M., W. 10:30AM - 12:20PM (CMU 326)

**Office Hours:** M., W. 2:30AM - 3:20AM (Sav 353)

**TA:** Hee Gee Chang (Savery 319B) [Office hour: Tue. 1:00pm-2:00pm]

**Useful Textbook:**

\*\* Lecture notes to be posted on the class website

\*\* Introductory Econometrics, by Jeffrey M. Wooldridge.

**Prerequisites:** Minimum grade of 2.0 in ECON 300, either ECON 311/STAT 311, MATH 390/STAT 390, or Q SCI 381.

**Course Description**

This course deals with theory and applications of statistical modeling to empirical work in economics; Focuses on regression analysis; derivations of regression estimators and their properties; and applied computer work in estimating multiple regression models.

**Grades:**

Grades will be determined based on your performance in two midterm exams (**Apr. 23 (Wednesday) and May 14 (Wednesday)**) (40%); final exam (**June 9, (Monday), 8:30am-10:00am, CMU 326**) (40%), a series of assignments (about 10%), and class attendance (about 10%). The final exam will be cumulative.

**Computer Software:** R (r-project.org) and RStudio (rstudio.com) are available for free and will be used throughout the course.

Heiss, Florian, Using R for Introductory Econometrics, 2nd edition. It can be read online for free here:

<http://www.urfie.net/>

**POLICY**

1. No make-up exams in principle
2. No questions using email

3. Assignments are due before the class time on the due date. No late assignments will be accepted.

### **Course Outline:**

- \* Review of Basic Statistical Concepts
  - Random Experiment, Sample Space, Random Variable, Population, Sample
- \* The Principle of the Ordinary Least Squares Method
- \* The Principle of Hypothesis Testing
- \* Multiple Regression Analysis
  - Model set up and estimation
  - Hypothesis testing
- \* Generalized Least Squares (GLS)
  - Heteroscedasticity
  - Autocorrelation
- \* IV (Instrumental Variables) Estimation

### **Academic Integrity**

You are expected to complete your own work for every assignment and exam. Looking at a neighbors exam is considered cheating. If a student is seen committing this act, they will not be allowed to continue taking their exam. The neighbor sitting next to the student will also be duly punished if they are seen as facilitating this act of cheating. Altering an exam before submitting it for a review of the grading, obtaining an advance copy of an examination, or arranging for a surrogate test-taker are all flagrant violations of the university policy. Cheating of any kind may result in expulsion from the University. The Department of Economics will follow the university policy in case of academic misconduct. Students found to have engaged in academic dishonesty will be subject to sanctions, which range from a disciplinary warning to permanent expulsion from the university, depending on the seriousness of the misconduct.

### **Use of Plagiarism Detection Software**

The University of Washington has a license agreement with SimCheck, an educational tool that helps prevent or identify plagiarism from Internet resources. Your instructor may use the service in this class by requiring that assignments are submitted electronically to be checked by SimCheck. The SimCheck Report will indicate the amount of

original text in your work and whether all material that you quoted, paraphrased, summarized, or used from another source is appropriately referenced.

### **DRS Accommodations**

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 at <http://disability.uw.edu>

### **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 (<https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/>). Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form (<https://registrar.washington.edu/students/religious-accommodations-request/>).