**Economics 4818-002** Spring 2020

Prof. Xiaodong Liu

Office: ECON 202 Location: Econ 117

Voice: Meeting Times: TTH 12:30 - 1:45

Office Hours: TTH 10:30 - 12:00

Class website: All course materials will be posted on Canvas.

# **Course Description:**

This course provides an introduction to the theory and applications of modern econometrics. This course begins by reviewing and extending the statistical material covered in Econ 3818. Following this, students are guided through the principals of regression analysis starting with the simple regression model. Issues in relation to estimation, inference and specification will be explored.

#### Text:

Introductory Econometrics: A Modern Approach, edition) by Jeffery M. Wooldridge.

The text is important, as I will follow it closely. Keep up with the readings. It is essential for success in this class.

## **Prerequisites:**

Economics 3818, Introduction to Statistics with Computer Applications, or its equivalent.

## **Software:**

We will utilize Microsoft Excel for the data analysis in this course. Excel is available in all campus computer labs, including the lab in the basement of the Economics building.

#### **Assessment:**

There will be two midterm exams, a final exam, and periodic problem sets.

- 1. Class participation (10 pts)
- 2. Problem sets (10 pts)
- 3. Midterm exams (25 pts each)
- 4. Final exam (30 pts)

A student can miss two classes. After that, one point will be deducted for each missed class. There will be no makeup exams. A student who misses a midterm due to an excused absence will have the additional weight shifted to the final.

# **Tentative Course Outline (Text chapters are in parentheses):**

- 1. Review of Mathematics and Statistics (Appendices B and C)
- 2. The Simple Regression Model (Ch. 2)
- 3. Multiple Regression Analysis: Estimation (Ch. 3)

### Midterm 1

- 4. Multiple Regression Analysis: Inference (Ch. 4)
- 5. Multiple Regression Analysis: Large Sample Properties of OLS (Ch. 5)
- 6. Multiple Regression Analysis: Further Issues (Ch. 6)

## Midterm 2

- 7. Heteroskedasticity (Ch. 8)
- 8. More on Specification and Data Problems (Ch. 9)
- 9. Multiple Regression Analysis with Qualitative Information: Binary Variables (Ch. 7)

## **Final**

Link to the required syllabus statements.