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# Hankuk University of Foreign Studies

**2019 Summer Session** 

## **ECON 400 Elementary Econometrics**

# **Course Outline**

Term: July 01-August 02,2019

Class Hours: 12:00-13:50PM (Monday through Friday)

**Course Code: ECON 400** 

Instructor: Byung Joo Lee, Visiting Professor of Economics

Home Institution: University of Notre Dame, Notre Dame, IN 46556 U.S.A.

**Office Hours: TBA** 

Email:bjleend@gmail.com

Credit: 4

**Class Hours:** This course will have 72 class hours, including 40 lecture hours, 10 lecturer office hours, 10-hour TA discussion sessions, 2-hour review sessions, 10-hour extra classes.

#### **Course Description:**

The purpose of this course is to help students learn how to use statistical and econometric methods in empirical economic applications. This course is oriented towards the practical applications of economic theory with econometric methods rather than the theoretical development of these subjects. This course emphasizes to analyze economic problems using statistical and econometric methods.

This course intends to train economics major (or other) students to be more analytically oriented.



This will enhance their job market skills and/or provide better preparation for the graduate school to become professional economists.

This course is comprised of 4 sessions of 120 minutes per week for 5 weeks. This course is very intensive and covers course content equivalent to one regular semester class in U.S. colleges.

#### **Textbook:**

 Introductory Econometrics: A Modern Approach by Jeffrey M. Wooldridge, 6th Edition, 2016, Cengage Learning

#### **Prerequisite:**

1. Statistics for Economics, Principles of Economics, or equivalent

#### Attendance:

Students should attend class regularly, arrive on time and not leave early. While you are in class, show the proper respect to your instructor and to your classmates. When you must miss a class, it is your responsibility to get the class material from me or your classmates. Class attendance will be checked. You will earn maximum 15 points for attendance for the final grade. Late arrival and excused absence will cost 0.5 point. Excessive absence may result in the course grade of "F".

#### Grading:

There will be one midterm exam and one final exam, 40% each. Exams test basic econometric theory and empirical applications. Homework accounts for the remaining 20% for the course grade. There is 15 extra points for attendance.

#### **Academic Honor Code:**

The Code of Honor will be strictly applied. Honor Code pledges "I will not participate in or tolerate academic dishonesty." Students will not give or receive aid on exams. This includes, but is not limited to, viewing the exams of others, sharing answers with others, and using books or notes



while taking the exam. You can collaborate to study your homework, but you have to submit your own completed homework to receive appropriate credit. Copying solutions from others, whether they are current or past, constitutes plagiarism.

## **Computer Program:**

We will use Stata for our class. Stata is relatively inexpensive but comprehensive statistical and econometrics program, and very easy to learn. Stata is widely used in academic research area and becomes increasingly popular in business area too. Stata runs on both Windows and Mac OS. You need to purchase and install Stata program in your computer. To avoid any possible problems, I strongly recommend you do this while you are in your U.S. school before you come to AUIA summer program. You CANNOT take this course without Stata. • Go to www.stata.com  $\rightarrow$  Purchase  $\rightarrow$  Order Stata  $\rightarrow$  select Country (United States)  $\rightarrow$  select Students and New Purchase  $\rightarrow$  select Stata product: Stata/IC 6 month license

#### **Tentative Course Schedule**

The course outline is tentative and I will modify accordingly depending on the pace of the class.

#### Week 1: Econometrics and OLS

<u>Session 1:</u> Chapter 1: The Nature of Econometrics and Economic Data <u>Session 2:</u> Chapter 2: The Simple Regression Model <u>Session 3:</u> Introduction to Stata <u>Session 4:</u> TA Review Session

## Week 2: Multiple Regression Analysis

<u>Session 5:</u> Chapter 3: Multiple Regression Analysis: Estimation <u>Session 6:</u> Chapter 4: Multiple Regression Analysis: Inference <u>Session 7:</u> Chapter 5: Multiple Regression Analysis: OLS Asymptotics <u>Session 8:</u> TA Review Session

#### Week 3: Violation of OLS Regression Assumptions



<u>Session 9:</u> Midterm Exam <u>Session 10:</u> Chapter 7: Multiple Regression Analysis with Qualitative Information <u>Session 11:</u> Chapter 8: Heteroskedasticity <u>Session 12:</u> TA Review Session

## Week 4: Regression Analysis with Time Series Data

<u>Session 13:</u> Chapter 9: More on Specification and Data Problems
<u>Session 14:</u> Chapter 10: Basic Regression Analysis with Time Series Data
<u>Session 15:</u> Chapter 12: Serial Correlation and Heteroskedasticity in Time Series Regressions
<u>Session 16:</u> TA Review Session

## Week 5: Panel Data Regression Analysis

Session 17: Chapter 13: Panel Data Method: Pooling Cross Sections Across Time Session 18: Semester Review Session 19: Final Exam