

Seoul Campus 02450 서울특별시 동대문구 이문로 107 tel 02.2173.2093 fax 02.960.7898 107, Imun-ro, Dongdaemun-gu, Seoul, 02450, Korea Global Campus 17035 경기도 용인시 처인구 모현면 외대로 81 tel 031.330.4114 fax 031.333.1708 81, Oedae-ro, Mohyeon-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do, 17035, Korea

# Hankuk University of Foreign Studies

2020 Summer Session

# **ECON 400 Econometrics**

# **Course Outline**

Term: July 06-August 07,2020

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

**Course Code: ECON 400** 

Instructor: Dr. Yunshan (Victor) Lian

Home Institution: University of Wisconsin

**Office Hours: By Appointment** 

Email: victor.lian@hotmail.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:**

ECON 400 introduces you the regression methods for analyzing data in economics. This course emphasizes both the theoretical and the practical aspects of statistical analysis, focusing on techniques for estimating econometric models of various kinds and for conducting tests of hypotheses of interest to economists. The goal is to help you develop a solid theoretical background in introductory level econometrics, the ability to implement the techniques and to critique empirical studies in economics.

### **Course Objectives:**



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By the end of this course, you should be able to:

- Understand the nature and scope of econometrics as a social science
- Use statistical analysis, including the classical regression model, to estimate relevant economic parameters, predict economic outcomes, and test economic hypotheses using quantitative data.
- Understand the basic assumptions of the classical linear regression model, and identify and correct (if possible) any violations of these assumptions, such as autocorrelation and heteroscedasticity.
- Develop and maintain a working knowledge of econometrics that will provide a basic foundation for future study in econometrics and statistical techniques.

#### **Prerequisites:**

- 1. Principles of Microeconomics or equivalent
- 2. Introductory Statistics, Statistics for Economics, or equivalent

#### **Required Textbooks:**

Introduction to Econometrics (3e) by James Stock and Mark Watson. Publisher: Pearson. ISBN-13: 978-0133486872 ISBN-10: 0133486877

#### **Evaluation:**

20% Attendance & discussion20% Exercise & homework30% Midterm exam30% Final exam

### Grading:

A+:95 - 100	A:94-90
B+ : 89 - 85	B: 84 - 80
C+: 79 - 75	C: 74 - 70
D+: 69 - 65	D: 64 - 60
F : Fail	

Course Schedule (may subject to change for the purpose of learning effectiveness)

### Week 1

Chapter 1: Economic Questions and Data

- Chapter 2: Review of Probability
- Chapter 3: Review of Statistics
- Chapter 4: Linear Regression with One Regressor



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### TA Review Session

### Week 2

Chapter 5: Regression with a Single Regressor: Hypothesis Tests and Confidence Intervals Chapter 6: Linear Regression with Multiple Regressors Chapter 7: Hypothesis Tests and Confidence Intervals in Multiple Regression TA Review Session

### Week 3

Midterm Exam Chapter 8: Nonlinear Regression Functions Chapter 9: Assessing Studies Based on Multiple Regression TA Review Session

### Week 4

Chapter 10: Regression with Panel Data Chapter 12: Instrumental Variables Regression Chapter 13: Experiments and Quasi-Experiments

TA Review Session

## Week 5

Chapter 14: Prediction with Many Regressions and Big Data

Chapter 15: Introduction to Time Series Regression and Forecasting

Chapter 16: Estimation of Dynamic Causal Effects

Final Exam