

**ECO 518**  
**Econometric Analysis**

Spring 2020

# Course Overview

- This is the first econometrics course for Master's students in the economics department at Korea University.
- Students from other departments or institutions must consult the instructor for the adequateness of their taking this course.
  - Must pass a math exam!

# Course Overview

- The aim of the course is to develop familiarity with a wide range of statistical and econometric techniques in the classical models.
- This course emphasizes on rigorous mathematical treatments of classical econometric models.
  - Some mathematical background is needed.
  - “Linear algebra” and “Mathematical Statistics” will be extremely helpful.

# About me

- [dukpakim@korea.ac.kr](mailto:dukpakim@korea.ac.kr)
- Office: “PSE” 426
- Office Hours: Wed 10:30-11:50pm or by appointments
- Don't phone me unless it is an emergency.

# Lecture notes

- There is no required textbook.
- We will follow lecture notes.
- They are available at Hu-Mun-Sa.

# References

- Econometric Theory and Methods by Davidson and MacKinnon
- Econometric Methods by Johnston and DiNardo
- Econometric Analysis by Greene
- Introduction to Econometrics by Stock and Watson
- Introductory Econometrics, A Modern Approach by Wooldridge

# Grading Policy

- Grades will be determined based on HWs (20 pts), Midterm (30pts) and Final exam (50pts).
  - Attendance will NOT be taken.
  - The final exam is cumulative.
- A student who obtains 25 pts or less in total will be given an F grade.
- The median student is expected to receive around B+.

# Grading Policy

- Not taking the midterm exam with no legitimate reason will lead to ZERO point.
  - Student who want to be excused from a midterm exam with a legitimate reason should seek for approval as early as possible.
  - When a student is excused from a midterm exam, the weight of his/her final exam will be increased correspondingly.



# Grading Policy

- Not taking the final exam will lead to an F grade.
  - No student will ever be excused from the final exam.
  - Students with a legitimate reason may take a makeup exam upon obtaining the instructor's approval.
  - The makeup is an oral exam.
  - No early exam will be available.
  - Requests of a makeup exam owing to travel plans will never be accepted (International students).

# Course Schedule

- Tuesday, 12:00-1:15pm and 1:30-2:45pm
- PSE 507
- No class on May 5.
- Midterm on Apr 21
- Final on June 16

# Topics (before midterm)

- (Review of Linear Algebra)
- (Review of Probability)
- Geometry of the Least Squares Estimator
- Properties of the Least Squares Estimator
- The Basic Linear Model; Finite Sample Results
- Restricted Least Squares
- Normal Distribution Theory
- Asymptotic Theory

# Topics (after midterm)

- The Basic Linear Model; Asymptotic Results
- The Maximum Likelihood Estimation
- Introduction to Time Series Analysis
- The Generalized Least Squares
- The Instrumental Variable Estimation
- The Generalized Method of Moments

# Other class policies

- No food except for beverages is allowed in the classroom.
- No laptop!

# One last word

- Don't be shy to ask questions!