ECONOMETRICS (ECON 301)

Spring 2021
SABANCI UNIVERSITY

Lecturer:	Erdal Aydin	**Office Hours:**	Wednesday 10.30 – 11.30
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Course Schedule:

- Wednesday (Question and Answer session) / 9:40 – 10:30
- Zoom link: https://sabanciuniv.zoom.us/j/3762788336
- There will be recorded lectures (Uploaded to SUCourse).

Recitation: will be recorded (Uploaded to SUCourse)

Course Objectives:

Students who have successfully completed this course have a good understanding of basic techniques of empirical economics, including linear regression, time series analysis, panel data methods and instrumental variable estimation. They are able to apply these techniques using the software package STATA.

Description:

This course provides an introduction to econometric methods, with a strong emphasis on the application of these methods in applied economic research.

In the first half of the course, students first acquire a basic understanding of the nature of empirical research and the possibilities and limitations of econometric methods. They study the basics of one of econometrics' key tools, linear regression analysis of cross-sectional data. Along the way, students are introduced to the software package STATA and econometric methods are illustrated with empirical examples.

In the second half of the course, more advanced topics will be introduced, including regression analysis with time series data, regression analysis with panel data and instrumental variables estimation.

Prerequisites: MATH306, ECON204

Required Textbook: We will use a single text book:

- Jeffrey Wooldridge (2013), Introductory Econometrics, International 6th edition, Cengage Learning (you can also use the 4th-5th editions).
  For Stata tutorials, please check http://www.stata.com/links/video-tutorials/

Grading Policy:

The final grade is based on 5 problem sets (50%) and a take-home final exam (50%).

Problem Sets:

- There will be 5 graded problem sets. Problem sets will consist both theoretical and computer-exercise type questions.
- Solutions to PSs must be completed and submitted individually before the deadlines. **PSs submitted after their deadlines will receive zero credit**.

- Application questions in the problem sets should be done in STATA. **STATA log files MUST be added to your solution sheets.**
- Some students might be interviewed in order to verify the originality of their solutions.

Final Exam:

- The final exam will be a take home exam including interpretation and computer-exercise type questions.
- You will be given a time around one week to submit your solutions after the announcement of the final exam questions.
- Application questions in the exam should be done in STATA. **STATA log files MUST be added to your solution sheets.**
- Some students might be interviewed in order to verify the originality of their exam papers.

Tentative Course Outline:

WEEK 1 : Introduction (Ch.1)
WEEK 2 : Review of Probability & Statistics (App.B&App.C)
WEEK 3 : The Simple Regression Model (Ch.2) – PS1 posted
WEEK 4 : Multiple Regression Analysis: Estimation (Ch.3)
WEEK 5 : Multiple Regression Analysis: Inference (Ch.4) – PS2 posted
WEEK 6 : Multiple Regression Analysis: OLS Asymptotics& Further Issues (Ch.5-6)
WEEK 7 : Multiple Regression Analysis with Qualitative Information (Ch.7)
WEEK 9 : Specification and Data issues (Ch.8-9) – PS3 posted
WEEK 10 : Regression Analysis with Time Series Data I (Ch.10)
WEEK 11 : Regression Analysis with Time Series Data II (Ch.11-12) – PS4 posted
WEEK 12 : Regression with Panel Data (Ch. 13-14)
WEEK 13 : Instrumental Variables Estimation and 2-SLS (Ch.15) – PS5 posted
WEEK 14 : Review Lecture