**Antalya Bilim University**

**Department of Economics**

**ECON 1403: Applied Econometrics 1**

**Fall 2021**

Class time& Place: Online, Monday 13:30 – 16:30

Office hours: By appointment, online

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This course builds on third-year econometrics courses and focusses on how to do econometric analysis using R, a free and very powerful statistical computing software. It starts with the linear regression models and then covers common nonlinear models of microeconometric methods, such as logit, probit, and tobit, as well as regression models for count data. It then deals with censored data, corner solution outcomes, and sample selection. The course has a practical flavour. The emphasis is not on proofs but on intuition and on applications.

**Textbook:**

J. M. Wooldridge (2020) Introductory Econometrics: A Modern Approach. 7th Edition. Cengage.

Students are responsible to get a **copy** of the textbook.

**Other useful books:**

J. Fox & S. Weisberg (2019). An R Companion to Applied Regression. SAGE.

F. Heiss (2020). Using R for Introductory Econometrics. 2nd Edition. Available at <http://www.urfie.net>.

C. Kleiber & A. Zeileis (2008). Applied Econometrics with R. Springer.

C. Colonescu (2016). Principles of Econometrics with R. Can be downloaded from <https://bookdown.org/ccolonescu/RPoE4/>.

**Learning Outcomes**

The aim of this course is to provide students with hands-on experience in applying contemporary econometric methods. After completing this course, you will be able to:

* develop an understanding of how one chooses an econometric model to analyse the data at hand;
* use the chosen model to analyse the data using statistical software;
* interpret the results obtained:
* able to critically assess empirical work produced and published by researchers.

**Academic Honesty and Plagiarism**

Plagiarism is using the words or ideas of others and presenting them as your own. Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. Although plagiarism is well established in Turkish educational system, you will be punished heavily if you are caught do it.

**Assessment:** Assessment is based on econometric analysis of data using R (or any other econometric software you may wish to use).

1. **Assignments (20%)**: There are two assignments, each counting 10% towards your final grade. The timing of the them will be based on the progress made in the course.
2. **Midterm Exam**: 30%
3. **Final Exam:** 50%

**Course Schedule**

**WEEKS 1-2 Introduction to R**

**WEEKS 3-4 Review of linear models**

**WEEK 5 Nonlinear models and the maximum likelihood estimator**

**WEEKS 6-7 Binary outcome models**

**WEEK 8 Midterm exam**

**WEEK 9 Fractional response models**

**WEEK 10 Regression models for count data**

**WEEK 11 Midterm Exam**

**WEEKS 12 Regression models for corner solutions**

**WEEK 13 Regression models for censored data**

**WEEK 14 Sample selection models**