**Antalya Bilim University**

**Department of Economics**

**ECON 1403: Applied Econometrics 1**

**Fall 2020**

Class time& Place: Online, TBA

Office hours: Online, TBA

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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:**

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

Students are responsible to get a **copy** of the textbook. You should be able to download it via the University’s library.

**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>.

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

**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 Criteria:**

1. **Assignments (40%)**: There are four computer assignments, each counting 10% towards your final grade. All require using the statistical software R to analyse the data you will be provided with. Precise deadlines for submitting the assignment, and the precise details on the scoring system, will be communicated later.
2. **Project (60%):** A project based on a research paper published in a top academic journal. This is essentially a replication project to verify and extend the published results. You can choose the publication yourself, but it needs to be approved by me. If you have not done so by the end of the 5th week, then I will choose the paper for you. You cannot choose a paper chosen by another student. A bonus mark will be added to your mark for the course if you have chosen your own paper. (5% of your average of the sum of the assignment and project marks.) More details and guidelines about the project will be provided later.

**Course Schedule**

**WEEK 1 Introduction to R**

**WEEKS 2-3 Linear models**

**WEEK 3 Nonlinear models and the maximum likelihood estimator**

**WEEK 4 Binary outcome models**

**WEEK 5 Fractional response models**

**WEEK 6 Regression models for count data**

**WEEKS 7-8 Regression models for corner solutions**

**WEEKS 9-10 Regression models for censored data**

**WEEKS 11-12 Sample selection models**

**WEEKS 13-14 Replication examples of selected journal articles**