
Eco 231w
Econometrics
SPRING 2014

INSTRUCTOR: Kuzey Yilmaz
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E-mail is the easiest way to communicate with me. Note that I do not regularly check email on weekends.

TEACHING ASSISTANT: Lin Liu (linliu@rochester.edu)

TERM PAPER ASSISTANT: Matthew Knowles (mknowles1988@gmail.com)

OFFICE HOURS: TR at 10:00 to 12:00.

TIME and LOCATION: MW at 12:30 to 13:45, HUTCH 140

CLASS WEB SITE: Blackboard Learning System at the University of Rochester. Blackboard will contain the syllabus, homework assignments and class announcements. Please check Blackboard regularly for announcements. You can access the course web page through <https://my.rochester.edu>

TEXTBOOK: James Stock and Mark Watson (2011), *Introduction to Econometrics*, 3rd Edition, Prentice Hall, ISBN 00138009007. Supplementary online material: http://wps.aw.com/aw_stock_ie_3/

SOFTWARE: We will be using the program Stata in the discussion sections and for homework assignments. Stata is available on the computers in 114 Harkness. If you wish, you can purchase your own copy of Intercooled Stata (Small Stata 13) for \$ 35.00 online at:
<http://www.stata.com/order/new/edu/gradplan.html>

PURPOSE: Econometrics covers the tools and methods used in empirical investigations of economic phenomena. These tools and methods are also useful for analyzing many practical problems that arise in fields related to Economics, such as Finance, Marketing, Political Science, and Public Policy. A famous example which is widely used in marketing involves the estimation of a consumption function, which then allows us to predict consumption patterns of individuals with different

income levels and demographic characteristics. Another business-related application is to estimate the default risks of individuals who apply for loans. Determination of voting behavior of individuals who belong to different socio-economic groups is a good example from Political Science. A frequently cited example from Public Policy is evaluation of the impact of changes in compulsory education.

ECON 231 is based on linear regression, the most widely used tool for systematic examination of data. The main objective of ECON 231 is to equip the students with practical knowledge of estimation and hypothesis testing using linear regression. Applications are an essential part of the course, and will be implemented on the University of Rochester computer network, using STATA.

PREREQUISITES: ECO 230 (equivalent STT 213 or MTH 203). Basically, a good background in elementary statistics and basic calculus is required.

COURSE REQUIREMENTS: There will be weekly assignments, a term paper, two midterm exams and a final. They will count toward the grade as follows:

Assignments	10%
Term Paper	20%
Midterm	20% each
Final	30%

Homework problem sets emphasize applying the methods presented in class. In my opinion, homeworks are the best way to learn econometrics. I encourage students to work together in groups for the homework assignments, although solutions should be written and handed separately. I will assign problem sets weekly, and your answers will be due at the beginning of the class, normally one week after a problem set is assigned. Late problem sets will not be accepted for any reason. There will be a term-paper due at the end of the semester. The term-paper guidelines will be provided later in the course. A literature survey and preliminary data analysis is due on *wednesday, March 26*.

The midterm exams will be administered on/around *wednesday, February 26* and *wednesday, April 9*, respectively. As determined and announced by the office of registrar, your final exam will be given on *tuesday, May 6 at 8:30 am*. There will be no make-up exams, and any conflicts or emergencies should be approved by me in advance of the exams.

OUTLINE: Below is a tentative outline for the course. Topics will be added/subtracted as time allows.

<u>Topic</u>	<u>Reading</u>
1. Economic Questions and Data	Chapter 1
2. Review of Probability	Chapter 2
3. Review of Statistics	Chapter 3
4. Linear Regression with One Regressor	Chapter 4 and 5
5. Multiple Regression	Chapter 6 and 7
6. Nonlinear Regression	Chapter 8
7. Assessment on Multiple Regression	Chapter 9
8. Regression with Panel Data	Chapter 10
9. Regression with a Binary Dependent Variable	Chapter 11
10. Experiments and Quasi-experiments	Chapter 13
11. Introduction to Time Series Regression and Forecasting	Chapter 14