

ECON 215 – ECONOMETRIC THEORY AND METHODS
Fall 2016; MWF 9:00

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Office hours: TR 9–12; Tues 3–5, and by appointment.

Text: J. Wooldridge, *Introductory Econometrics*, Cengage, sixth edition, 2016.

Objective: The aim of this course is to give you both a theoretical understanding of the principles of econometrics and some hands-on experience of the possibilities and problems of the subject. Econometrics is concerned with the connection between economic concepts, theories and hypotheses on the one hand, and ‘real world’ economic data on the other. Typical econometric tasks include the quantification of economic relationships (such as demand curves), the precise specification of economic theories, and the testing of hypotheses derived from theory. The main tool for these purposes is regression analysis. We shall review and develop some basic concepts of statistics and probability, leading to an examination of regression analysis, its principles and pitfalls. Once sufficient groundwork is established, we will work with an econometric computer program (*gretl*), first carrying out prepared exercises and then progressing to an original piece of empirical research.

Assessment: Your grade in this class will be based on four elements, as follows:

Midterm exam	20 percent
Project	40
Final exam	30
Homeworks	10

Please note that the project carries a good chunk of the grade. Some notes on the project can be found on the class webpage; you will begin planning for it before Fall Break and it will be due on Monday November 28.

Syllabus: We will devote approximately 4+ class sessions to each of the following topic headings on average, although some may take somewhat longer than others. You are expected to keep up with the textbook readings; these will be supplemented by handouts on topics which require additional clarification.

1. Introduction and review of probability and statistics
Handouts; Wooldridge Chapter 1, Appendices B and C
 2. The linear regression model
Wooldridge Chapters 2 and 3
 3. Multiple regression: Inference
Wooldridge Chapters 4 and 6
 4. Dealing with qualitative variables (1), independent variables
Wooldridge Chapter 7
 5. Regression specification and heteroskedasticity
Wooldridge Chapters 8 and 9
- Midterm exam, Monday October 17**
Begin planning of regression project, Wooldridge Ch. 19

6. Instrumental variables estimation
Wooldridge chapter 15
7. Issues in time series modeling
Wooldridge Chapters 10, 11 and 12
8. Dealing with qualitative variables (2), dependent variables
Wooldridge Chapter 17
9. Methods for panel data
Wooldridge Chapters 13 and 14

Final exam, Thursday December 15, 9 am