

ECO 392M3
Econometrics II

P.W. Wilson

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Office: BRB 3.130

Office hours: Monday and Wednesday 10:00–11:00, or by appointment

Class location/time: BRB 2.136, Monday and Wednesday 2:00–3:15

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Required text:

- A.C. Cameron and P.K. Trivedi (2005), *Microeconometrics: Methods and Applications*, New York: Cambridge University Press.

Other texts that might be useful:

- Dhrymes, P. (1970), *Econometrics: Statistical Foundations and Applications*, New York.
- Judge, G.G., R.C. Hill, W.E. Griffiths, H.Lütkepohl, and T.C. Lee, (1988), *Introduction to the Theory and Practice of Econometrics*, New York: John Wiley & Sons, Inc.
- Maddala, G.S. (1983), *Limited Dependent and Qualitative Variables in Econometrics*, Cambridge: Cambridge University Press.
- Theil, H. (1971), *Principles of Econometrics*, New York: John Wiley and Sons, Inc.
- Zaman, A. (1996), *Statistical Foundations for Econometric Techniques*, San Diego: Academic Press, Inc.

Course Objectives: This course is the third in a sequence of graduate statistics and econometrics courses. Students are expected to have successfully completed the department's graduate course on introductory probability and statistics (ECO 392M1), or an equivalent course, and Econometrics I (ECO 392M2). This course will provide students with tools needed to evaluate critically applied work by others, as well as to conduct applied research using nonlinear models and methods.

Course Content: This course provides an introduction to a number of topics from econometric theory that are important in a variety of economic applications. Part I of the course will develop methods for estimation and inference. Whereas Econometrics I deals primarily with linear estimation using least-squares methods, this course focuses on maximum likelihood estimation of nonlinear models. Other estimation methods may be briefly discussed as time permits, and at least one class will be devoted to nonparametric estimation methods. Particular attention will be given to specification and estimation of parametric statistical models, as well as inference and testing in both standard and non-standard situations.

Part II of this course will focus on application of methodologies for estimation and inference developed in Part I of the course to specific econometric models. Although rather different models will be considered, in each case the approach will consist of several steps.

First, a statistical model will be specified. Estimation of parameters and perhaps other features of the model using an appropriate method will then be discussed. Inferences and hypothesis tests about the parameters will be considered, with a discussion of how the model and estimation results might be interpreted.

The following is a list of data types to be examined in some depth:

1. discrete choice;
2. ordered discrete data;
3. censoring, truncation, and selection;
4. count data;
5. duration data;
6. mixtures;
7. production data;
8. miscellaneous problems.

A reading list and other useful material can be found by going to my web page (see above) and clicking on the link “Course Materials for Students” and then clicking on the link “ECO392M.3”.

Course Grade Determination: Students will have the following opportunities to demonstrate their abilities: homework assignments (10%), midterm exam (30%), and a final exam (60%). The relative weightings shown above are approximate. I expect the homework assignments to be done individually; however, I encourage you to consult with each other in working the homework assignments. Copying someone else’s work is not permitted—I am referring here to a mutual exchange of ideas. The homework assignments will include many empirical exercises, and will serve to reinforce material discussed in class.

Grades will be assigned in accordance with policies adopted by the Economics Department Graduate Studies Committee in spring, 1996. In addition to letter grades, + and – symbols will be used and recorded by the Department (pluses and minuses do not count in calculation of students’ GPAs by the university). Assigned grades will indicate performance as follows:

<i>A+</i>	Extraordinary performance (rarely given).
<i>A</i>	Good performance.
<i>A–</i>	Satisfactory performance; performance level that would yield a “Pass” on comprehensive exams.
<i>B+</i>	Performance near the margin; close to the minimum performance level required to pass comprehensive exams.
<i>B</i>	Weak performance; will require intensive study to pass comprehensive exams.
<i>B–</i>	Poor performance; well below the level needed to pass comprehensive exams.
<i>C</i>	Failing grade.