Economics 5243

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Hours Wednesday 8:30-11:30 and by appointment

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1 Purpose

The objective of this course is for you to become knowledgeable users of the linear regression model. The topics include the estimation and specification of the linear regression model, imposition and testing of exact linear parameter restrictions, confidence intervals, estimation of nonlinear models, and an introduction to generalized least squares.

In order to become functionally literate in applied econometrics, it is also necessary for you to learn some of the basics of econometric theory. The basic tools of econometric theory will help to slow the rate of depreciation of your hard-earned econometric human capital. It is well worth your time to learn these tools now, especially if you intend to do any empirical work in the future.

2 Textbooks

Required

> Russell Davidson and James MacKinnon, *Econometric Theory and Methods*, Oxford, 2004.

Most of our lectures and class assignments will come from this book. I intend to follow it very carefully. The major shortcoming of this book is that it doesn't contain many empirical examples. Also, it can be rather terse at times and you

may need to supplement your reading in ETM with one of the recommended books below. In particular, Wooldridge's *Introductory Econometrics: A Modern Approach* is a nice upper level undergraduate book that should help to fill in the gaps. It also has a number of very good data sets and empirical examples that we may use from time to time. The data sets and empirical examples from the book are available through links on our class website.

You can also check out the last two chapters in Stock and Watson's book listed below for very nice summaries of the linear model and general linear model. I'm using this book in the undergraduate course and it will be available for a while at the OSU bookstore.

Recommended

Jeffrey Wooldridge, Introductory Econometrics: A Modern Approach, 2nd edition, Southwestern, 2003.

Kennedy, Peter, *A Guide to Econometrics* 5th edition, MIT Press.

Other Sources

James Stock and Mark Watson, *Introduction to Econometrics*, Addison Wesley, 2004.

Fomby, Hill, and Johnson, *Advanced Econometric Methods*, Springer Verlag, 1984. Second Printing, 1988.

Jan Kmenta, *The Elements of Econometrics.*

Judge et al., *The Theory and Practice of Econometrics*, 2nd Edition, Wiley, 1985. (a.k.a., "Big Judge.")

Schmidt, Peter, *Econometrics*, Marcel Dekker, 1976.

3   Prerequisites

This course requires you to work with probability, statistics, calculus, matrix algebra, and to write computer programs (as well as learn econometrics). If you have any doubts about whether your experience is sufficient, please talk to me about it. At a minimum, I assume that you know the basics of differential calculus, matrix algebra, probability theory, and how to use a Windows based microcomputer. If you have any doubts about whether your experience is sufficient, please talk to me about it.

4 Course Outline

5   Computer Assignments

Early in the course you will begin to use the computer to do portions of your homework. You will be responsible for learning to use the STATA software that is available in the CBA lab. You may also purchase a 1 year license for STATA directly from the STATA corporation. Follow the link from our class page on

my website if this interests you.

6 Grades

Your grade in this class will be based on your performance on 3 exams and on homework assignments.

Grade Weights	
Exam 1	27%
Exam 2	27%
Exam 3	27%
Homework	19%

Grades will be assigned according to the following scale:

Grades	
90%–100%	A
76%–90%	B
60%–75%	C
50%–60%	D
< 50%	F

All exams must be taken at the designated time. No make up exams will be given. If you miss an exam you will receive a grade of zero.

Unless you are specifically told otherwise by me, all homework must be turned in at the beginning of the class period on the date that it is due. Homework will not be accepted if late.

7 Attendance

Regular attendance is expected. You are responsible for any material you miss because of absence. In general, I do not permit students to copy my notes. If you miss class and need a copy of the notes, please obtain them from one of your classmates.

8   Cheating Policy

Cheating will not be tolerated. Any violation of the University's academic dishonesty policy will be prosecuted according to University regulations. You will receive a grade of 0 on any test or assignment you are caught cheating on. In addition, you are responsible for the security of your work (in other words, if someone copies your work, you will also receive a zero on the test or assignment).