

DARTMOUTH COLLEGE
Department of Economics

SYLLABUS
Fall 2002

This class is an introduction to econometrics. As such, it provides an overview of how to carry out and interpret empirical research. While some mathematical derivations will be presented, the emphasis will be on gaining an intuitive understanding of the principles of econometric analysis, not on learning to do formal proofs. More importantly, the student should learn from this course to be a thoughtful consumer and a careful practitioner of economic research.

Textbook:

Wooldridge, Jefferey M., *Introductory Econometrics: A Modern Approach*, 2nd edition, 2003

Requirements:

There will be one in-class exam and a comprehensive final exam. Problem sets will be distributed, collected and discussed in class on a regular basis. The problem sets will require the use of the statistical program *Stata*, which is available through the Key Server. You will not receive credit for problem sets not turned in by the start of class on the date due!! However, to allow for the fact that unforeseen circumstances do arise, **one problem set may be skipped without penalty**. In addition, there will be a written project due toward the end of the term. The project will consist of carrying out a specified empirical project and writing up the results in the form of a research paper. Further details on the nature of the project will be provided early in the term.

Grading:

Your final grade will be based on the following:

Problem Sets	15%
Project	15%
In-Class Exam	30%
<u>Final Exam</u>	<u>40%</u>
Total	100%

Office Hours:

Except as noted on the Class Schedule, my open office hours (316 Rockefeller) are Tuesdays from 2:00 to 5:00 during which time you can stop by without an appointment. Appointments are also available to meet with me outside of my open office hours. If you would like to set up an appointment, please contact me by BlitzMail (Patricia M. Anderson), or talk to me in class about a mutually agreeable time.

Course Materials:

There is a web site for this class at www.dartmouth.edu/~econ20pa that contains such things as “Cliff notes” for the text, class log files and data sets, problem sets, a feedback form, course announcements and other useful links.

Monday	Tuesday	Wednesday	Thursday	Friday
Sep 23	Sep 24 Open Office Hours 2:00 to 5:00	Sep 25 INTRO Ch 1	Sep 26	Sep 27 SIMPLE REGRESSION Ch 2
Sep 30 MULTIPLE REGRESSION Ch 3	Oct 1 Open Office Hours 2:00 to 5:00	Oct 2 MULTIPLE REGRESSION Ch 3 <i>PS 1 Out</i>	Oct 3	Oct 4 INFERENCE Ch 4
Oct 7 INFERENCE Ch 4	Oct 8 Open Office Hours 2:00 to 5:00	Oct 9 DUMMY VARIABLES Ch 7 PS 1 Due <i>PS 2 Out</i>	Oct 10	Oct 11 DUMMY VARIABLES Ch 7
Oct 14 ASYMPTOTICS Ch 5	Oct 15 Open Office Hours 2:00 to 5:00	Oct 16 FURTHER ISSUES Ch 6 PS 2 Due <i>PS 3 Out</i>	Oct 17	Oct 18 NO CLASS Take advantage of this break to look at the project data!
Oct 21 HETERO- SKEDASTICITY Ch 8	Oct 22 Open Office Hours 2:00 to 5:00	Oct 23 HETERO- SKEDASTICITY Ch 8 PS 3 Due	Oct 24	Oct 25 SPECIFICATION & DATA PROBS Ch 9
Oct 28 LIMITED DEPENDENT VARIABLES Ch 17	Oct 29 Open Office Hours 2:00 to 5:00	Oct 30 EXAM (IN CLASS)	Oct 31	Nov 1 NO CLASS (Harvard Game Holiday)
Nov 4 LIMITED DEPENDENT VARIABLES Ch 17	Nov 5 Open Office Hours 2:00 to 5:00	Nov 6 PANEL DATA Ch 13 <i>PS 4 Out</i>	Nov 7 If you haven't already, you really should start work on the project now!	Nov 8 PANEL DATA Ch 13&14

Monday	Tuesday	Wednesday	Thursday	Friday
Nov 11 PANEL DATA Ch 14	Nov 12 Open Office Hours 2:00 to 5:00	Nov 13 IV & 2SLS Ch 15 <i>PS 4 Due</i> <i>PS 5 Out</i>	Nov 14	Nov 15 IV & 2SLS Ch 15 Final Drop Date
Nov 18 SIMULTANEOUS EQUATIONS Ch 16	Nov 19 Open Office Hours 2:00 to 5:00	Nov 20 TIME SERIES BASIC ISSUES Ch 10 <i>PS 6 Out</i> <i>PS 5 Due</i>	Nov 21	Nov 22 TIME SERIES BASIC ISSUES Ch 11
Nov 25 TIME SERIES FURTHER ANALYSIS Ch 12	Nov 26 Open Office Hours 2:00 to 5:00 <i>Project Due by 4pm - No Exceptions!</i>	Nov 27 NO CLASS (Thanksgiving)	Nov 28 Happy Thanksgiving!	Nov 29 NO CLASS (Thanksgiving)
Dec 2 TIME SERIES FURTHER ANALYSIS Ch 18	Dec 3 Open Office Hours 2:00 to 5:00	Dec 4 SUMMARY & CONCLUSIONS Ch 19 <i>PS 6 Due</i>	Dec 5 READING PERIOD Extra Open Office Hours 2:00 to 5:00	Dec 6 READING PERIOD FINAL EXAM TOMORROW at 10:30

The above schedule represents the basic topic to be covered in class each day and the chapter in which that topic is covered by your text. Note that the date of the **exam** is clearly marked – if you foresee an unavoidable conflict, discuss this with me immediately. In general, exams may not be postponed, but we may be able to reach a mutually agreeable accommodation if discussed well in advance. Also pay attention to when **problem sets** will be passed out and when they are due, as well as to any class cancellations. Please note the due date for the **class project**. Absolutely no extensions will be granted. It is highly recommended that you not wait until the last minute to tackle this project! Several friendly reminders to get started are given on the schedule.

Any student with learning, physical or psychiatric disabilities who may need disability-related classroom accommodations is requested to speak with me by **October 4**. The Academic Skills Center in 301 Collis Center will be asked to verify that you are registered for these services. All discussions will remain confidential, although the Student Disabilities Coordinator may be consulted to discuss appropriate implementation.

The Academic Skills Center will also have tutors and study groups available for this class.

Additional Notes about Economics 20*Readings*

The main source of the lecture material is the assigned textbook. While the author does a really nice job at covering not just the nuts and bolts, but also the intuition, it can be overwhelming for the beginning student. To prepare for class, you may want to download the PowerPoint presentations from the web site and use them as “Cliff Notes” for the text topic. On occasion these slides will be used in class – mainly to avoid using onerous notation on the board – but they should not be considered a substitute for class. Rather, they are most useful as a roadmap for the text that assists you in getting the most out of class.

Class Participation

The material in this class is inherently cumulative, and falling behind can be devastating. Thus, it is important to keep up with the material and come to class prepared to ask questions. During class, don't be afraid to make me stop, back up, and clarify a concept before moving on. If the class is not voluntarily revealing whether they are following along, I will be forced to rely on cold calling to gauge understanding. You have been warned!

Stata Computer Package

This course will make heavy use of Stata 7, a statistical package that is key-served for both Windows and Macintosh. Stata will be used in class to demonstrate concepts using real data, and the commands necessary for applying these concepts on problem sets and the course project will be covered. Additionally, Stata has an on-line help function. You may also find it useful to try some of the built-in tutorials – just type *help tutorial* at the command line for more information. Machines in the Social Science Computing Lab also have Stata installed.

Problem Sets

The problem sets are designed to serve two main purposes. First, they will prepare you for exams by allowing you to test your understanding of the material. Second, they will prepare you for the course project by allowing you to practice using Stata. Many people find that small group discussions help with their understanding. Thus, you are encouraged to form a group of no more than 5 people to work on the problem sets. Each group will turn in one copy and everyone will receive the same grade. By putting your name on the group work, you are acknowledging not only that you did your fair share, but also that you understand how the group arrived at all of the answers. Thus, it is not acceptable to simply split the problem set questions up among the group and then staple the answers together at the end. Note that you are not required to stick with the same group for every assignment; you may need to experiment to form a group that best matches your learning style.

Course Project

The course project is designed to give you a feel for working on a real research question, and thus to help better prepare you for carrying out your own project for your 40-level class. The research area is the effect of alcohol on labor market outcomes. More detailed information will be provided early in the class. In brief, I will provide you with a data set containing several labor market outcome variables, several measures of alcohol use, and many background variables. As with the problem sets, you are encouraged to form a group of no more than 5 people to work on the project. While it may be reasonable to split up writing duties, the overall approach and interpretation of the results needs to be fully discussed among the group members. Again your name on the paper is an acknowledgement of both having done your fair share and having understood what was done.