

ECON 644
Empirical Analysis II: Introduction to Economic Models

Instructors' Contact Information and Class Logistics:

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<i>Office Hours:</i>	ELMS Discussion Board Thursday all day; and by appointment		
<i>TA:</i>	TBA	<i>Email:</i>	TBA
<i>Office Hours:</i>	posted on ELMS with weekly reminders sent as ELMS announcements		
<i>Class Location:</i>	1400 16th Street, NW Suite 140, Washington DC		
<i>Class Time:</i>	Wednesday, 6:45 - 9:30 pm		
<i>Class Website</i>	https://myelms.umd.edu		

Course Description

This course is an introduction to econometric methods with applications to public policy analysis. Primary focus on application and interpretation of multiple regression analysis.

Course Objectives

This is the second in the three-course series in empirical analysis required for the Masters in Professional Studies in Applied Economics. At the end of the course, you should be familiar with:

- OLS simple and multiple regression (estimation and inference)
- Nonlinear OLS models (polynomials and log-transformations)
- Validity of estimates: omitted variable bias, measurement errors, heteroskedasticity
- Limited dependent variables
- Thinking critically about the internal and external validity of empirical work

using Stata be able to:

- Creating do-files and log-files (review from ECON 643 - Acock Ch. 4)
- Working with do-files that automatically over-write log-files with all the output
- Reading and writing data files (Mitchell, Ch. 2)
- Creating New Variables (Mitchell, Ch. 5)
- Model and estimate regressions

Course Materials

Textbooks:

- Introductory Econometrics: A Modern Approach. Jeffrey M. Wooldridge. South-Western College Pub; 5th edition (ISBN10: 1-111-53104-8)
- Data Management Using Stata: A Practical Handbook. Michael N. Mitchell (2010), Stata Press (<http://www.stata.com/bookstore/data-management-using-stata/index.html>)

Course software:

- Our program's curriculum is designed to use Stata as the statistical software. Other leading statistical software packages include SAS and R. We have decided to focus on one package to enhance the continuity across courses in our program. A more superficial familiarity with multiple packages might be just as good as a deep understanding of a single package. But working with multiple packages would also result in less time to learn econometrics. Students in our program should purchase Stata. Stata offers different "flavors" and different lengths of license. Price varies according to these two factors. A description of the flavors is given here: <http://www.stata.com/products/which-stata-is-right-for-me/> .

Stata offers student discounts via the "Gradplan":

<http://www.stata.com/order/new/edu/gradplans/direct-ship-pricing/>

The least expensive appropriate option is \$69 for a 6-month license for "Stata IC". A one-year license is \$98, and a perpetual license (which never expires) is \$198. We do not recommend "Small Stata". Small Stata is too limited for the course work our program. Under the Gradplan, you may install Stata on up to three different computers. You may also eventually upgrade your version of Stata and your license, at a discount, if you wish.

Course Website:

Copies of the course syllabus, your grades, and other relevant links and documents will be posted on the course's ELMS/Canvas website. You can access the site via www.elms.umd.edu. You will need to use your University of Maryland "directory ID" and password.

Additional Resources:

- Stata Web-Book, UCLA (<http://www.ats.ucla.edu/stat/stata/webbooks/reg/default.htm>)
- Copies of this syllabus, lecture notes, problem sets, and other relevant documents will be made available through the course website.
- Acock, Alan (2014) A Gentle Introduction to Stata, 4th ed, Stata Press.

Prerequisites

Econ 643 – Empirical Analysis I: Foundations of Empirical Research:

- specifically it is assumed that you are familiar with the Stata topics covered in Chs. 1, 4, 5, and 8 of Acock, Alan (2014) A Gentle Introduction to Stata, 4th ed, Stata Press.

Course Structure

Based on the objectives of the course, each lecture would be split between concepts presentation (in the form of slides) and computer exercises using Stata. Lectures will follow textbooks.

Course Work

- **Problems Sets (30%):** There will be six problem sets assigned throughout the quarter. The problem sets are combination of analytical problems and empirical problems using Stata. They are due at the beginning of class on the designated due date (see below) and all work should be stapled together with your name on each page to avoid losing points due to missing pages. Stata work **must** be turned electronically in the form of Stata log files to the TA by the email: MastersTA@econ.umd.edu. You are encouraged to consult with classmates in completing the problem sets. You are allowed to give and receive help on the problems. However, you are NOT allowed to share problem sets (i.e., written answers, Stata code) with others.
- **Online Discussion (5%):** The weekly online discussions are mandatory and will be conducted via online discussion utility in ELMS/Canvas.
- **Midterm Exam (25%):** The midterm exam will be given in class and will be 70 minutes in length. During the exam you will be allowed to use your notes, textbook, calculator, and Stata's help menu. You will be asked to conduct statistical and econometric analyses using Stata and explain your findings. The midterm must be completed in the form of the Stata log file and submitted to the TA by the email: MastersTA@econ.umd.edu.
- **Final Exam (40%):** The final exam will be given on the last day of class and will be 120 minutes in length. The exam will be a comprehensive exam covering ALL material discussed throughout the course, including lecture slides, textbook and other reading material, in-class assignments and problem sets. During the exam you will be allowed to use your notes, textbook, calculator, and Stata's help menu. The final exam must be completed in the form of the Stata log file and submitted to the TA by the email: MastersTA@econ.umd.edu.

Assignment and Test Dates:

Problem Set #1	Assigned: June 8, 2016	Due: June 15, 2016
Problem Set #2	Assigned: June 15, 2016	Due: July 6, 2016
Problem Set #3:	Assigned: July 6, 2016	Due: July 20, 2016
Midterm Exam	July 13, 2016	
Problem Set #4:	Assigned: July 20, 2016	Due: July 27, 2016
Problem Set #5:	Assigned: July 27, 2016	Due Aug 3, 2016
Problem Set #6	Assigned: Aug 3, 2016	Due: August 10, 2016
Final Exam	August 17, 2016	

Contact me immediately if you foresee a problem with the dates of the midterm. Final cannot be re-scheduled unless a student has a valid excuse with documentation.

Student-Faculty Interaction:

Student attendance and participation during class time are essential for successfully completing this class. I will be available before and after class sessions for consultation and will provide support and help by email and between class meetings. I will schedule office hours for in-person meetings by appointment. I will monitor discussion threads on ELMS and answer any unresolved questions related to class material and problem sets.

Work Load:

Mastering the material covered in this course requires a significant amount of work outside of class. Students should expect to spend more time outside of class than in class – typically at least twice as much time. The courses in our DC program are 12-week courses that cover all the same material as a traditional semester-long 3-credit course (15 weeks). The compressed schedule makes it possible to complete our degree in just 15 months if you take 2 courses each term. But the compressed schedule also implies an accelerated pace with an average of 25% more work per week in a given course ($15/12 = 1.25$). The normal full-time load in a master’s program is 3 courses per semester, or 6 courses per year. Students who take 2 courses per quarter in our program complete 8 courses per year. So taking 2 courses per quarter in our program is equivalent to 133% of a full-time load ($8/6 = 1.33$). Students who take 2 courses per term in our DC program should expect to do an average of 25-33% more work per week than a student in a full-time master’s degree program.

Email:

Email: Email is the primary means of communication outside the classroom, and I will use it to inform you of important announcements. Students are responsible for updating their current email address via <http://www.testudo.umd.edu/apps/saddr/> AND for paying attention to messages I send to the class via ELMS. Failure to check email, errors in forwarding email, and returned email due to “mailbox full” or “user unknown” will not excuse a student from missing announcements or deadlines. I will do my best to respond to email within 36 hours.

Contact Hours:

Three credit courses at the University of Maryland require a minimum amount of contact between instructors and students. Our courses’ 12 weekly 3-hour meetings only satisfy 80% of the university’s contact requirement. The other 20% is usually satisfied by weekly mandatory and graded online contact. Instructors have some discretion in how they structure the online component of their course. In principle, the contact hours requirement could be satisfied by scheduling 3 additional 150-minute meetings per term, or 6 additional 75-minute meetings, or 10 additional 45-minute meetings. The weekly online discussions are a more flexible way to ensure that our program’s courses in DC provide the same level of student-instructor contact as the traditional 15-week, face-to-face, version of the same course when it is taught on campus in College Park.

Make-Up Exams:

Students are required to take all three exams which are designated “major scheduled grading events”. Makeup exams will be granted only to those students whose excuse complies with University policy. The four valid excuses according to University policy are: illness (of student or a student’s dependent), religious observance, participation in University events at the request of University authorities, and compelling circumstances beyond your control.

Re-Grading of Exams:

All re-grade requests must be submitted in writing within a week of the class or discussion in which the exam is returned (not when you actually pick up your exam). Except for material errors (mistake in adding the points) the entire exam will be re-graded, regardless of your request. No

regrading requests will be honored after this one-week period, even if you have not picked up your exam yet.

Final Grade:

Your final letter grade will be based on your weighted score and your performance relative to the class. I generally do not grade on the curve unless the exams averages are very low for the whole class.

University of Maryland and Department of Economics Policies

Academic Integrity:

The University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards applicable to all undergraduate students, and you are responsible for upholding these standards as you complete assignments and take exams in this course. Please make yourself aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information see www.studenthonorcouncil.umd.edu.

Student Conduct: Students are expected to treat each other with respect. Disruptive behavior of any kind will not be tolerated. Students who are unable to show civility with one another or myself will be referred to the Office of Student Conduct. You are expected to adhere to the Code of Student Conduct.

Medical Excuses:

University policy requires students who are absent due to illness/injury to furnish documentary support to the instructor. I ask students to contact me by email or by phone prior to class time to indicate that you have an illness or injury. For a single missed class, an email or phone call will suffice. For illness or injury that causes a student to miss more than one consecutive class, you must provide written documentation verifying your illness/injury immediately upon your return to class.

Students with Disabilities: The University of Maryland does not discriminate regardless of differences in age, race, ethnicity, sex, religion, disability, sexual orientation, class, political affiliation, and national origin. Reasonable accommodations will be made to students with documented disabilities. I will make every effort to accommodate students who are registered with the Disability Support Services (DSS) Office and who provide me with a University of Maryland DSS Accommodation form.

Academic Progress:

The graduate school requires that students maintain a GPA of at least 3.0. Students whose cumulative GPA falls below 3.0 will be placed on academic probation by the graduate school. Students on academic probation must ask the program's director to petition the graduate school if they want to remain in the program. The petition must include a plan for getting the student's GPA up to at least 3.0. Students who do not live up to their plan can be forced to leave the program without having earned the degree.

School Closings and Delays:

Information regarding official University closing and delays can be found on the campus website. Since our program is an evening program in downtown Washington, DC, rather than a day program in College Park, we do not always cancel classes on the same days as the College Park campus. The program director will always announce cancellation information to the program as an announcement on the program's ELMS/Canvas site. This will generally be done by 1:00 p.m. on days when weather or other factors are an issue.

Building Access:

The door to the building at 1400 16th Street is unlocked on weekdays until 7:00 p.m. Students who arrive after 7:00 will find the door locked. The building's security guard is stationed at a desk just inside the door until 11:00 p.m. and will let you in. You can also call the phone on the security guard's desk by dialing (202) 328-5158. If the security guard happens to be away from his or her desk when you arrive, you can pick up the black phone to the right of the door at 1400 16th Street. You will be connected to the company that handles security for our building. If you tell them you are with the University of Maryland, they should ask you for a password. The password is "Drawbridge". When you tell them the password, they will be able to unlock the door for you.

Tentative Course Outline

This outline may be revised during the semester. For the latest version, check the course webpage.

Lectures	Dates	Text Book	Topics
1,2	June 1, 2016	Ch. 1, Appendix B,C Mitchell, Ch 2	Review: Probability and Statistics Reading and Writing Datasets
3	June 8, 2016	Ch. 2	Simple Regression Analysis
4	June 15, 2016	3 Mitchell, Ch 5 (first half)	Multiple Regression Analysis (MRA) Creating Variables
5	June 22, 2016	4	MRA - Inference
6	June 29, 2016	6 Mitchell, Ch 5 (second half)	MRA - Issues Creating Variables
7	July 6, 2016	7	MRA- Dummy Variables
Midterm Exam	July 13, 2016		
8	July 20,2016	7	MRA- Dummy Variables
9	July 27,2016	9 8	MRA- Measurement Errors Heteroskedasticity
10	Aug 3, 2016	8	Heteroskedasticity
11	August 10, 2016	Ch 17	Limited Dependent Variable Models Final Review
FINAL EXAM	August 17, 2016		