
George Mason University • Economics 535

APPLIED ECONOMETRICS

Spring 2020 • Monday 7.20-10.00pm • Founders Hall 111

Prof. Johanna Mollerstrom • Contact: jmollers@gmu.edu • TA: Moumita Roy

Office hours by appointment.

Course Description

This course will introduce you to the use of multiple regression analysis and other tools needed to analyze data in the social sciences. The emphasis is on empirical applications. There are two main objectives of the course: 1) To provide you with the ability to analyze critically the empirical analysis done by others at a level sufficient to make sound decisions based on the analysis. 2) To provide you with the skills necessary to perform empirical analysis on your own.

Readings

You will need one book for the class: J. Stock and M. Watson. *Introduction to Econometrics*, Third updated edition. Pearson.

Other readings will be made available electronically on BlackBoard.

Course requirements

The course grade will be determined using the following weights: a) Class participation and quizzes: 10%. b) Problem sets: 30%. c) Mid-term exam: 30%. d) Final exam: 30%.

Quizzes

At the start of every class (with the exception of the first class) you will be given a short quiz with multiple choice questions. The quiz will cover the readings for that week.

Problem sets

There will be four problem sets. To receive credit, the problem sets must be submitted to me at the beginning of class the day that it is due. You may work on the problem sets in small groups. You must, however, write up your answers individually, in your own words. Put the names of your study group member(s) on your problem set. Duplicate answers will receive no credit.

Stata

You will be required to use Stata for the problem sets (the Stata IC version is sufficient for this course): <http://www.stata.com/order/new/edu/gradplans/student-pricing/>

Exams

There will be two exams. The mid-term exam will cover the material that we go through until (and including) March 2. The final exam covers the whole course. The midterm and final will be closed book and closed notes.

Date	Topic	Readings (chapters in Stock and Watson)	Assignments due
January 27	Introduction. Review of statistics, part 1.	1-3 (focus: 1, 2.1-2.3, 2.5-2.6, 3.1-3.5, 3.7)	
February 3	Review of statistics, part 2. Introduction to Stata.	1-3 (focus: 1, 2.1-2.3, 2.5-2.6, 3.1-3.5, 3.7)	
February 10	Bivariate regression, part 1. A second look at Stata.	4 (focus: 4.1-4.3, 4.6) (17, if you want more)	PS1
February 17	Bivariate regression, part 2.	5 (focus: 5.1-5.4, 5.7) (17, if you want more)	
February 24	Multivariate regression, part 1.	6 (focus: 6.1-6.4, 6.7-6.8) (18, if you want more)	
March 2	Multivariate regression, part 2.	7, 9 (focus: 7.1-7.2, 7.5, 9.1-9.2) (18, if you want more)	PS2
March 9	<i>No class (spring break)</i>		
March 16	<i>Midterm exam</i>		
March 23	Interaction variables. Nonlinear regressions: quadratics, logs.	8 (focus: 8.1-8.4)	
March 30	Binary dependent variables.	11 (focus: 11.1-11.3)	PS3
April 6	IV regression.	12 (focus: 12.1, 12.3-12.5)	
April 13	Experiments, quasi-experiments and diff-in-diff.	13 (focus: 13.1-13.5)	
April 20	Quasi-experiments ctd: Regression discontinuity.	13 (focus: 13.1-13.5)	PS4
April 27	Panel data and fixed effects. Exam preparation.	10.1-10.4, 10.6	
May 4	<i>Reserve</i>		
May 11	<i>Final exam</i>		

Academic Integrity

The integrity of the University community is affected by the individual choices made by each of us. Mason has an Honor Code with clear guidelines regarding academic integrity. Three fundamental and rather simple principles to follow at all times are that: (1) all work submitted be your own; (2) when using the work or ideas of others, including fellow students, give full credit through accurate citations; and (3) if you are uncertain about the ground rules on a particular assignment, ask for clarification. No grade is important enough to justify academic misconduct. Plagiarism means using the exact words, opinions, or factual information from another person without giving the person credit. Writers give credit through accepted documentation styles, such as parenthetical citation, footnotes, or endnotes. Paraphrased material must also be cited, using MLA or APA format. A simple listing of books or articles is not sufficient. Plagiarism is the equivalent of intellectual robbery and cannot be tolerated in the academic setting. If you have any doubts about what constitutes plagiarism, please see me.

Disability Accommodation

If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services (ODS) at 993-2474, <http://ods.gmu.edu>. All academic accommodations must be arranged through the ODS.

Electronic devices

Cell phones, pagers, laptops or pagers and other communicative devices are not allowed in this class. Please keep them turned off, stowed away and out of sight. Engaging in activities not related to the course (e.g., gaming, email, chat, etc.) will result in a significant deduction to your participation grade.