

## Syllabus

**Class hours:** Tuesday 6:00pm-8:45pm  
**Instructor:** Dr. Alexandra Minicozzi  
**Web Page:** [https://jshare.johnshopkins.edu/aminico1/public\\_html/](https://jshare.johnshopkins.edu/aminico1/public_html/)  
**Email:** Alexandra.Minicozzi@cbo.gov  
**Office Hours:** On request.

**Purpose:** My purpose is to teach you to apply mathematical and statistical techniques to economics in the study of problems, the analysis of data, and the development and testing of theories and models. You will learn how to generate and correctly interpret ordinary least squares regression estimates and, by the end of the course, you should have the tools necessary to recognize and solve common problems encountered in empirically testing theories.

**Grading:** Your grade will be determined by your performance on 6 homework assignments, two mid-term examinations, and a final exam. Problem set completion will aid you in studying for tests and learning programming, but by themselves account for only 10% of your final grade. Each mid-term will count for 25% and the final exam (which is cumulative) for 40%. No late assignments will be accepted but I will drop your lowest homework grade from computation of your homework average. This approach allows me to both accommodate students' unpredictably busy schedules and offer an immediate problem set answer key for those who desire one.

**Textbook:** Introductory Econometrics: A Modern Approach, Jeffrey Wooldridge, 4<sup>th</sup> Edition 2009 South-Western (ISBN: 0-324-58162-9).

### Computing Requirements:

Certain homework assignments require students to estimate regression coefficients. Any software output will be accepted and all computational work can be completed in the computer lab using SAS.

Vesta Gueschkova will provide support to students should they encounter SAS programming problems while working on projects for class. She is available in the student lab M, W 5:30-7:30pm, or you may email her at [<vgueschkova@yahoo.com>](mailto:vgueschkova@yahoo.com). During our third class meeting we will collectively review/introduce SAS commands for reading in data, generating summary statistics, and running regressions.

### Course Outline and Reading Schedule:

<b>Date</b>	<b>Reading: Topic</b>
Sept. 9	Ch. 1, Appendix B: Introduction, Statistics Review
Sept. 16	Ch. 2.1-2.5: Bivariate Ordinary Least Squares Regression
Sept. 23	Ch. 3: Multiple Regression Estimation
Sept. 30	Ch. 4: Multiple Regression Inference
Oct. 7	<b>Mid-term Examination</b>
Oct. 14	Ch. 5.1, 5.2, 6.1-6.4: Asymptotics and advanced issues
Oct. 21	Ch. 7: Multiple Regression with Binary Variables
Oct. 28	Ch. 8: Heteroskedasticity
Nov. 4	Ch. 9: Specification
Nov. 11	Handout: Time Series
Nov. 18	<b>Mid-term Examination</b> , Ch. 13,14: Panel Data Methods
Nov. 25	Ch. 15.1-15.5: Instrumental Variables
Dec. 2	Ch. 15.5, 16.1-16.4: Simultaneous Equation Models
Dec. 9	<b>Final Examination</b>