

**Advanced Academic Programs**  
**Zanvyl Krieger School of Arts and Sciences**  
**Johns Hopkins University**  
Graduate Program for Applied Economics  
Econometrics 440.606.81  
Summer 2016

Instructor: Suzanne K. McCoskey  
Class Schedule: May 11 – August 16  
Blackboard Site for Course at <http://blackboard.jhu.edu>  
Access to the site requires a Johns Hopkins Enterprise Directory (JHED) password.  
E-Mail: [smccosk1@jhu.edu](mailto:smccosk1@jhu.edu)

### **Course Description**

This course focuses on the application of statistical methods to the testing and estimation of economic relationships. After developing the theoretical constructs of classical least squares, common problems encountered when applying this approach, including serial correlation, heteroscedasticity, and multicollinearity, are discussed. Techniques for dealing with these problems are then examined. Models with lagged variables are considered, as is estimation with instrumental variables and two-stage least squares. Prerequisites: 440.605 Statistics.

### **Textbook**

Woolridge, Jeffrey M. *Introductory Econometrics: A Modern Approach 5<sup>th</sup> Edition*. South-Western College Publishing, 2013. ISBN 978-1-111-53104-1.

Note that if you choose to use an earlier edition of the text for cost reasons (as students often do) it is **your** responsibility to accommodate any changes in chapter material coverage and editorial changes. For that reason, I would highly recommend you limit your search to the most recent “older editions.”

### **Software**

The supported software for this course is STATA. There are several options you have for acquiring STATA for use in this course:

(1) Through a personal license available through STATA itself, note that six month access would be sufficient. Also small STATA (max 99 var; 1,200 obs) will be fine for this course although could be limiting in its uses outside of this course if you plan to work with larger data sets.

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

(2) Access for JHU students available through JHPulse. See our course Blackboard site for more information on access.

If you would prefer to use another software for this course, for example SPSS, note that not all the commands/functionalities we use for this class may be available and, in general, I will not be able to “translate” STATA commands into these other softwares. That would be **your** responsibility. Since most of the data sets will be STATA files, you will also have to let me know if you need other formats. I will

then most likely have to provide the data through EXCEL and it would be **your** responsibility to import it correctly into the software you want to use.

## Assessment and Grading

Your final grade will be based on the following elements:

Assignment/Exam	%	Posted and Due
Weekly Homework (11)	25%	Posted WED by 12PM (noon); due following TUES by 11:59PM (EST)
EXAM 1	20%	Posted WED June 8; due TUES June 14 by 11:59 PM
EXAM 2	20%	Posted WED July 13; due TUES July 19 by 11:59 PM
FINAL EXAM	25%	Posted MON Aug 8; due TUES Aug 16 by 11:59 PM
Discussion Board	10%	Throughout the Semester

Students may work together on homework assignments but EACH STUDENT must turn in his/her own copy of joint work.

The use of discussion boards in this class will be used to both create class community and to discuss student questions about chapter/note materials and homework assignments. Students should plan to participate continually throughout the semester on these discussion boards. For each Unit there will be a discussion thread for questions as well as a “think about this” question. Students should participate in one or both of these threads every week. For example, if you do not have questions about course material you should discuss the “think about this” question.

There will also be a thread on the discussion board called STUDENT LOUNGE. Your participation in this LOUNGE is optional and will not be included in your grade. The STUDENT LOUNGE is intended as a space for students to communicate with each other about homework assignments, course content, etc. I WILL NOT be reading the posts in the STUDENT LOUNGE unless there is a student concern about the communication within the lounge.

## Assigning Letter Grades

Letter	Description
A+	98% - 100%
A	94% - 97%
A-	90% - 93%
B+	88% - 89%
B	84% - 87%
B-	80% - 83% %
C	70% - 79%
F	0% - 69%

Letter grades are assigned based on the ranges identified in the table above. Note that it is my policy to allow Microsoft EXCEL to round grades in determining the final quantitative average and accompanying letter grade.

### Late Policy

(1) Weekly homework assignments can be turned in up to a week after the due date (i.e. the following MON by 5PM) without a late penalty. Assignments turned in more than a week late will “penalized” 10 percentage points off the homework grade (for example 94% -> 84%). Note that students will not have access to homework answer keys until the assignment is received by the instructor.

(2) Exams MUST be turned in by the due date. LATE EXAMS WILL NOT BE ACCEPTED without prior arrangement and discussion with the instructor.

### Course Schedule and Chapter Readings

	TOPIC	CHAPTERS
UNIT 1	Introduction Statistics and Matrix Algebra Review	Chapter 1; Appendix B.1 - B.4; D
UNIT 2	Simple Regression Model	Chapter 2
UNIT 3	Simple Regression Model (cont)	Chapter 2
UNIT 4	Multiple Regression: Estimation	Chapter 3
EXAM 1	X	<b>Chapters 1 - 3</b>
UNIT 5	Multiple Regression: Inference	Chapter 4
UNIT 6	Asymptotics, Further Issues	Chapters 5 - 6
UNIT 7	Binary Variables	Chapter 7
UNIT 8	Heteroskedasticity Specification Issues	Chapter 8 Chapter 9.1-9.2, 9.4 - 9.5

EXAM 2	X	<b>Chapters 4 - 9</b>
UNIT 9	Time Series, Serial Correlation	Chapter 10, Chapter 11.1 -11.3 Chapter 12.1 - 12.2, 12.5
UNIT 10	Panel Data	Chapter 13, Chapter 14 (exclude 14.3)
UNIT 11	Instrumental Variables Simultaneous Equations	Chapter 15 Chapter 16
FINAL	X	<b>TBD</b>

### **Instructor Feedback**

In general your assignments and exams will be due by TUES 11:59PM (EST). I expect to have assignments graded and returned by your by FRI of the same week by 5PM. You will always be able to see your grades and my feedback under the MY GRADES link in Blackboard.

### **University Policies**

This course adheres to all University policies described in the academic catalog. Please pay close attention to the following policies:

### **Students with Disabilities**

Johns Hopkins University is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact the coordinator listed on the [Disability Accommodations](#) page. Further information and a link to the Student Request for Accommodation form can also be found on the [Disability Accommodations](#) page.

### **Ethics & Plagiarism**

JHU Ethics Statement: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor.

Read and adhere to JHU's [Notice on Plagiarism](#).

## **Dropping the Course**

You are responsible for understanding the university's policies and procedures regarding withdrawing from courses found in the current catalog. You should be aware of the current deadlines according to the [Academic Calendar](#).

## **Getting Help**

You have a variety of methods to get help on Blackboard. Please consult the resource listed in the "Blackboard Help" link for important information. **If you encounter technical difficulty in completing or submitting any online assessment, please immediately contact the designated help desk listed on the [AAP online support page](#).** Also, contact your instructor at the email address listed in the syllabus.