

ECON 4950: Econometrics & Applications
Spring Semester 2018 (CRN 15695)
Department of Economics

Instructor: Golnoush Rahimzadeh
Class Time: Tuesdays 4:30pm – 7 pm
Class Location: Classroom South 301
Office Hours: Thursday 11am – 12:30 pm by appointment
Office Hours Location: Andrew Young School of Policy Studies, (AYSPS) Vault Floor
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(Please use your GSU email @student.gsu.edu to communicate)
Course Webpage: icollege

Prerequisites: Principles of Microeconomics (ECON 2105), Principles of Macroeconomics (ECON 2106), and Introductory Probability and Statistics

Course Description & Objective

This course develops basic knowledge of applied statistics and econometrics with a focus on the relationship between economic variables. The course will introduce estimation approaches such as simple and multiple regression analysis, and cover topics such as hypothesis testing, heteroscedasticity, measurement error, and omitted variable bias. These techniques will be applied to real data for the purpose of policy analysis in the areas of labor markets, industrial organization, finance, development, and taxation. The class is taught through a combination of lectures, discussion, homework, and exams.

Required Textbook

Introductory Econometrics: A Modern Approach (6th edition) by Jeffrey M. Wooldridge.
Website: academic.cengage.com/economics/Wooldridge

Collaborative Work: I strongly encourage you to discuss the homework assignments with others in the class. This is a powerful way for each of you to learn the material better. The homework you turn in to be graded, however, must be your own work. You may not turn in results based on someone else's programs or a classmate's analysis and claim credit as if you had done them yourself. If we have group homework projects, the entire group can turn in a single paper; but you should feel free to add "dissenting material" if you do not agree with the analysis or conclusions in group's final product.

Course Software:

There are several statistical packages for analyzing data. In this course, we will be using STATA. This software is available for use in the AYSPS building Room 720, 7th floor. Please note that access to the AYSPS building and computer lab are restricted to the following days and hours: Monday-Friday, 7:00 AM to 7:00 PM. The front doors of AYSPS lock at 7:00 PM and you will not have access after that. However, if you are already in the building you can continue to work. If you leave anytime after 7:00 PM you will not be able to re-enter. In order to enter the computer lab, you MUST have your GSU Panther card for the door swipe.

Suggested Online *Stata* Resources

1. **UCLA Academic Technology Services:**

This resource includes FAQs, learning modules, a reference guide, examples, etc...

<http://www.ats.ucla.edu/stat/stata/>

2. **Carolina Population Center:**

http://www.cpc.unc.edu/research/tools/data_analysis/statatutorial

This resource includes tutorial, examples, reference commands, etc...

3. **Data and Statistical Services, Princeton University:**

http://dss.princeton.edu/online_help/stats_packages/stata/

This resource includes general information on using STATA.

4. **Other Resources:**

<http://www.stata.com/links/resources-for-learning-stata/>

5. **YouTube:**

StataCorp LP: <http://www.youtube.com/user/statacorp>

Quick Tour of interface: http://www.youtube.com/watch?v=L8iIj_8lhRc

Quick Help: <http://www.youtube.com/watch?v=UpXNMeTzmuI>

PDF Documentation: <http://www.youtube.com/watch?v=KPHxC-HyrMk>

DO files: <http://www.youtube.com/watch?v=IRkZhh3hatU>

Installing new commands: <http://www.youtube.com/watch?v=3CJ-BTmuFws>

Descriptive statistics: <http://www.youtube.com/watch?v=kKFbnEWwa2s>

Simple OLS: <http://www.youtube.com/watch?v=HafqFSB9x70>

Assessment and Grading Policy:

1. All exams will be closed book. The final exam is cumulative in the sense that it covers information provided throughout the semester. However, study guidelines will be provided prior to each exam. You may bring a nonprogrammable calculator (a scientific one, for example, but not a graphing calculator). You will not be able to use cell phones or other electronic devices.
2. **Make-up Policy:** There will be absolutely **no make-up** exams. Your final exam will replace your lowest exam grade if your final exam is higher than your lowest exam. This means if you miss Exam 1 or Exam 2 (thus receiving a 0%), your final grade will replace that missed exam. Only *one* exam will be replaced and there is no adjustment if you miss the final exam. If you must miss both exams due to extenuating circumstances, let me know as soon as possible before the exam takes place (at least two weeks) so alternative arrangements can be made (such as an early exam). In order to make alternative arrangements I will need official documentation of the circumstance such as doctor's note, police report, etc.

3. See the table for details on how grades will be determined.

Component of Grade	Weight	Date
In-class quizzes and activities	15%	
Homework	20%	Due at beginning the class
Exam 1	20%	Feb 20 th
Exam 2	20%	March 27 th
Final Exam	30%	May 1 th
Total	105%	

4. Student grades will be assigned based on the following scale.

Course Grade	Evaluation
A+	your grade $\geq 97\%$
A	$\geq 93\%$
A-	$\geq 90\%$
B+	$\geq 87\%$
B	$\geq 83\%$
B-	$\geq 80\%$
C+	$\geq 77\%$
C	$\geq 73\%$
C-	$\geq 70\%$
D	$\geq 60\%$
F	$< 60\%$

Homeworks:

Some components of homework assignments will require using data and the statistical software STATA. Data sets necessary for homework can be found on the textbook's website, but will also be posted on icollege. You must append your do files and log files to any assignments that involve STATA use.

Homeworks due dates:

- HW 1 - Tue, Jan 30
- HW 2 - Tue, Feb 13
- HW 3 - Thu, March 6
- HW 4 - Thu, March 20
- HW 5 - Thu, Apr 17

Homeworks due at the beginning of the class in class or via email. I will NOT accept late homeworks and it is your responsibility to keep track of when the homework is due and make sure you turn it in.

In class quizzes and participation:

We are going to have in-class activities at the end of most class sessions. You can use your books and notes, as well as working with your classmates.

Additional Information

1. Students are responsible for reading this syllabus and understanding the information contained in it. I will not respond to email questions asking for information already contained in this syllabus, except important clarification questions.
2. **Communication:** Important announcements will be conveyed to students through their GSU email account. Class materials (syllabus, homework, homework solutions, etc.) will be posted on icollege. If you prefer an alternative email account for communication, email me to provide that email address. In every email to me, make sure to include your full name as registered in the course and your Panther ID number. Not checking your emails cannot be an excuse for not knowing about class announcements. *I will not be checking my emails through icollege. Please email me using my GSU email address provided above.*
3. All students are responsible for knowing and adhering to GSU's Policy on Academic Honesty as published in Student Code of Conduct Handbook (See <http://codeofconduct.gsu.edu/>).
4. **Course Evaluation:** Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State University. Upon completing the course, please take time to fill out the online course evaluation.
5. Students who wish to request accommodation for a disability may do so by registering with the [Office of Disability Services](#). Students may only be accommodated upon issuance by the Office of Disability Services of a signed [Accommodation Plan](#) and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought.
6. Students who withdraw after the midpoint of each term will not be eligible for a "W" except in cases of [Emergency Withdrawal](#).
 - a. Withdrawal Policy: <http://advisement.gsu.edu/self-service/policies/withdrawal-policy/>
 - b. Repeat to Replace Policy: <http://advisement.gsu.edu/self-service/policies/repeat-to-replace-policy/>
 - c. Grade Appeal and Change (including Incomplete Grades) Policy: <http://registrar.gsu.edu/academic-records/grading/grade-appeals-and-changes/>
7. Georgia State University values diversity and is committed to fostering and maintaining an educational environment which appreciates individual differences in all areas of operation including classroom instruction and materials. To this end, any actions, practices, or processes by any faculty, staff person, or student that discriminates against or is prejudicial toward any person or group based on race, gender, age, religion, ethnicity, nationality, disability, sexual orientation, or socioeconomic status will not be tolerated.
8. **Respectful Conduct:** Students are expected to behave properly in class, so as not to interfere with the learning environment of others in the classroom. I expect that you will show up on time and stay for the whole class period and not distract others (or yourself). Students should not leave before the class is dismissed by the instructor. If, because of an unusual circumstance, a student needs to leave the class early or come to class late, that student should notify the instructor before class begins. All electronic communication devices are to be turned off and made inaccessible during lectures and exams. Students **may not** use laptops, tablets or cell phones during class periods. Students not adhering to these rules/guidelines may be asked to leave the class and may be subject to an administrative withdrawal (depending on the severity of the infraction). See GSU policy on disruptive

student behavior in the classroom (<http://deanofstudents.gsu.edu/files/2013/03/Disruptive-Student-Conduct-in-the-Classroom-or-Other-Learning-Environment-April-2006.pdf>)

Plan of Lectures

Class Meeting	Date	Lecture Plan
Class 1	Tue, Jan 9	Introduction, chapter 1
Class 2	Tue, Jan 16	Chapter 2
Class 3	Tue, Jan 23	Chapter 2
Class 4	Tue, Jan 30	Chapter 3, Lab1
Class 5	Tue, Feb 6	Chapter 3, Chapter 4
Class 6	Tue, Feb 13	Lab2, Review for Exam 1
Class 7	Tue, Feb 20	Exam 1, (plus lecture after exam)
Class 8	Tue, Feb 27	Exam 1 Solution, Chapter 4
Class 9	Tue, March 6	Lab 3, chapter 6
NO CLASS – SPRING	Tue, March 13	-
Class 10	Tue, March 20	Chapter 7, Review for Exam 2
Class 11	Tue, March 27	Exam 2, (plus lecture after exam)
Class 12	Tue, Apr 3	Chapter 8, Lab 4
Class 13	Tue, Apr 10	Chapter 9
Class 14	Tue, Apr 17	Chapter 10, Review for Exam 1
Final	Tue, May 1	Final Exam

Final Notes: The course syllabus provides a general plan for the course; deviations may be necessary. The reading list and schedule should be viewed as “preliminary.” I may find it necessary or useful to make some adjustment to the schedule as I see how things progress. Homework assignments will be made during class meetings or by email or put on the course blackboard page.