

**Case Western Reserve University  
Department of Economics**

**Economics 326  
Econometrics**

**Contact Information**

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**Lecture Logistics**

Class:

Tues. and Thurs. 11:30 – 12:45  
PBL Room 05

2 Exceptions:

- Thurs. Aug 29 class will be held in the Computer Lab (PBL 07T)
- Thurs. Sep 26 Movie Night (extra credit), 7-9 PM in PBL 106

**Course Description**

Econometrics uses statistical methods to estimate economic relationships. In economics we are often encountered with situations where we would like to estimate the relationship between two variables while holding other factors constant. Econometric methods are important precisely because they can allow us to isolate the relationship between two variables. This class will cover the standard multiple regression model. In so doing, we will review the assumptions needed for this model to work as intended. Towards the end of the course, we will also review more advanced techniques that are commonly used in applied empirical work.

**Extra Help**

Econometrics is a tricky subject. I expect that even the best prepared students will struggle with the material at some point during the course. I encourage everyone to attend office hours and to ask questions on the course material and the problem sets. My office hours this semester are Tue 1:30-2:30 and Weds 4-5. Melinda Ashe is the TA for this class. Melinda will hold drop-in office hours each week in the computer lab (PBL 07T) on Tuesday from 7-9PM. Melinda will also lead an exam review session before each of the 3 exams on the following days: Sept 16, Nov 4, Dec 3 from 7-9 PM in our regular classroom (PBL 05).

## **Email Policy**

I will do my best to respond to all emails within 24 hours. Please don't send the same email 2x unless it has been more than one day. Please put: "Econ 326" in the subject line. Keep in mind that typing out a detailed response to a problem set (or lecture) question can take a long time and is generally difficult to read over email anyway. I will defer most substantive questions to office hours or before/after class. Email is best for logistical questions.

## **Grading**

Test 1:	15%
Test 2:	20%
Test 3:	15%
<u>Test subtotal:</u>	50%
9 problem sets:	20%
Research Paper:	20%
Reading Quizzes & Class Attentiveness:	10%

## **Tests**

All testing will be done in class and will only explicitly cover test the material since the last test. That said, since econometrics is a cumulative subject, each test will build upon the material earlier in the course. If you miss the day of the test you will receive a zero for that test. The only exceptions are an illness or a death in the family (in both cases you will need documentation).

Please be sure to talk to me before/after class, or during office hours if you have a disability that may require additional testing accommodations. Don't wait until the day of the exam. We will be sure to arrange a suitable accommodation.

Test re-grading: If I have miscounted points on a test please notify me immediately and I will fix the grade. If you think that I have incorrectly scored an answer, submit a complaint in writing to me indicating the question and your specific concern. I will re-grade the entire test. You should keep in mind that this might decrease your final grade.

Final grade test re-weighting: Sometimes we have a bad day. This goes for taking tests too. Recognizing that there may be a test that just didn't go well the final test portion of your final grade (worth 50% of final grade) will be calculated in a way that helps take this into account. After the 3<sup>rd</sup> test your test portion of your grade will be re-weighted so that the test you did best on is increased by 5 percentage points and the test you did worst on is decreased by 5 percentage points. For example, if your worst test was the 1<sup>st</sup> test and your best was the 3<sup>rd</sup> test then the first

test will count for 10% of your grade (instead of 15%) and the 3<sup>rd</sup> test will count for 20% (instead of 15%).

### **Problem Sets**

The problem sets are designed to review lecture material and prepare you for the tests. I feel strongly that econometrics is a subject that is best learned by getting your hands dirty. You can anticipate that each problem set will have problems from the book as well as problems where you will be asked to work with data using the statistical program Stata.

Problem sets will be collected at the start of class on the day which they are due. I will not accept late problem sets, nor will I accept electronically submitted problem sets. If you know in advance that you must miss a class the day a problem set is due then please drop off the problem set at my office before the scheduled class time, or have a classmate turn in the problem set for you. There are 10 problem sets, but you will be able to drop your lowest scoring problem set. That is: The 9 highest problem set grades will be calculated towards your final grade. The same testing re-grade policy applies to problem sets.

You are welcomed and encouraged to work in groups (of 2-4 people) when completing the problem sets. However, each member of the group must turn in their *own copy* of the problem set with the answers written in their own words. If you work in a group you must also cite your other group members by listing their names under your own (i.e. “group members: ...”).

Important note: If you do not cite group members then any similarities between your answers and another student’s answers will be considered cheating and disciplinary action will be taken according to CWRU Academic Integrity Standards.

### **Research Paper**

The grading for the Research Paper will include two parts that together will sum to the 20% course weight for the Research Paper: Paper Proposal (5%), Research Paper (15%).

The objective of the paper is to give you an opportunity to apply what you have learned in this class to a question of interest. The topic and research question are entirely up to you. However, one important consideration is that you will need to have data in order to run the econometric analysis.

The term paper should be 8-10 pages in length, plus at least one figure or table (more than one is better). You must create this figure or table (do not reproduce from another source). Good writing and clear economic reasoning are expected. A concise and well-written paper is better than a long rambling one. More details and guidelines about the paper and paper proposal will be provided later in the semester.

## Reading Quizzes and Class Attentiveness

As you will see, the course includes material from a text book and a number of additional readings (mostly published economic journal articles). The articles are examples of how economists have used the econometric techniques we will learn in this class to analyze a variety of questions.

You should plan on reading the journal articles. Doing so will positively affect your problem set, test, and class attentiveness grades. The articles will also give you an idea of how to write your term papers. There is a standard structure used for all economic journal articles.

As extra incentive to read the papers there will be between 2-9 “pop quizzes” during the semester at the start of class on the day that a paper reading is assigned. The quizzes will be very short (5 minutes). If you are late to class, or missing from class on the day of a quiz you will receive a zero for that quiz. The lowest scoring quiz will be dropped and not included in calculating your final quiz grade. The purpose of the quizzes is to make sure that you read the article and comprehended the major points. Some of the articles will include material that is “above” the level of this class or cover topics that we have yet to get to in the class. I will provide guidance on which parts of the articles to focus on and which parts to skip.

## Textbook and Readings

### Required Text:

Jeffrey M. Wooldridge (2009). *Introductory Econometrics A Modern Approach (4e)*. Mason, OH: South-Western.

- Note that there is a newer 5<sup>th</sup> edition available, but you should feel free to purchase the 4<sup>th</sup> edition.

### Recommended Texts:

Lawrence C. Hamilton (2009). *Statistics with Stata (Updated for Version 12)*. Belmont, CA: Brooks/Cole.

- This is a handy user guide for working with Stata (the statistics software we will use).

### Articles:

Links to articles will be posted on Blackboard.

- I suggest printing out all 9 articles and keeping them in a 3-ring binder. You are responsible for the material in the articles for classroom discussion, pop quizzes, and the 3 exams.

### Statistical software

Stata is the statistical software used in the class. Stata version 12 is installed on all of the computers in the computer lab. You are not required to purchase the software. The software is available for purchase at: <http://www.stata.com/order/new/edu/gradplans/student-pricing/> “Stata/IC” is the version of the software that you will need for the class (don’t purchase “small Stata”). You can purchase either Stata 12 or Stata 13. I encourage you to purchase the software if you are considering taking the 2<sup>nd</sup> semester econometrics class (which will be offered in the spring), writing an honors thesis in economics, or would like to save the hassle of having to do all of the Stata portions of the problem sets in the computer lab.

### **Academic Integrity**

All students in this course are expected to adhere to university standards of academic integrity. Cheating, plagiarism, and other forms of academic dishonesty will not be tolerated. For example, you may not consult with another person during an exam, or turn in written work that was prepared in whole or in part by someone else. It is also dishonest to submit, without the instructor’s consent, the same or similar work for more than one course. Ignorance will not be permitted as an excuse. If you are not sure whether something you plan to submit violates these standards, it is your responsibility to ask for clarification. You may either ask me, or consult credible sources such as:

<http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml>

As a reminder, the Case Western Reserve University Academic Integrity Standards can be found:

<http://studentaffairs.case.edu/groups/aiboard/policy.html>

[I thank Prof. Helper for granting me permission to use her Academic Integrity statement].

More comments on academic integrity:

- Cheating is a disservice to those classmates who study hard and play by the rules.
- I am confident that most students wouldn’t cheat on an exam regardless of the circumstances. However, I am an economist and also recognize that there are some students that may be tempted to cheat on exams if it appears that the benefit outweighs the cost.
- In case you have any doubts, we will strictly and fully enforce the above Academic Integrity Standards in this course. What this means is that all suspected cases of cheating on exams will be forwarded directly to Weatherhead’s Academic Integrity Officer. This is the case regardless of the “amount” of cheating (i.e. even if the suspected cheating is on just a subpart of a subpart of one question).
- To further dissuade academic dishonesty we will be taking a number of precautions that will increase the likelihood of catching anyone who cheats including some measures that will not be obvious unless you happen to be caught.