# Moravian College Department of Economics and Business

## **Economics 256: Applied Econometrics**

Fall 2014 (M W 8:55-10:05 and F 7:30-8:40 or 8:55-10:05)

Instructor: Eva Marikova Leeds, Ph.D., Professor

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Office Hours: M W 4:00-5:30 PM and by appointment

Prerequisites: ECON 152 and ECON 156

**Text:** A. H. Studenmund, *Using Econometrics,* Pearson/Addison Wesley, 2011, 6th edition. Bring it to class every day!

Course Objectives: This course applies statistical techniques to economic models. Specifically, you will

- · Review basic statistical concepts and notation
- Learn how to gather data
- Become familiar with the differences between Excel and SPSS
- Apply the classical regression model to different data sets
- Learn how to deal with different complications that arise in regression estimation, including selfselection and simultaneous determination
- Test hypotheses and evaluate the size of the effect

#### Requirements:

**Homework** is due every time we finish a chapter. Doing homework is the best way to learn the material—and some homework problems are on the exams! Every <u>neat</u> and <u>completed</u> homework counts for 0.5% of your grade; it is not graded. I distribute or post answers to all HW, and I review selected HW problems in class.

Some **lab** work is based on <u>data sets</u> provided by the book. See the instructions on p. 25. Turn in all HW before class time on the day it is due. Make **two** copies of HW 6 and 13 so you can turn one in and keep your notes as well. I do **not** accept late HW.

- If you are doing HW with someone else, you must **acknowledge** any help received, or provided, by writing the other student's or tutor's name on your HW.
- If you fail to do the HW, your final grade will be two fractions of a grade lower. Moreover, you will struggle with the exams, which will endanger your grade.

Two **regression** projects consist of finding and analyzing some publically available data. The simple regression project (due October 22) is a thorough review of ECON 156, and the multiple regression project (due November 12) incorporates the techniques from this course.

There are **four exams**. I provide all necessary formulas, but you must memorize the simplest ones. A take-home **final** is optional and can replace your lowest exam grade. It is a project using techniques from Chapters 13 or 16. There are **no make-up exams**. If you miss an exam, you must do the final project. Using **phones** and **leaving** the classroom are prohibited during any exam, but calculators are allowed.

Exam dates: Exam 1: September 17 (Wednesday)

Exam 2: October 8 (Wednesday)
Exam 3: November 5 (Wednesday)
Exam 4: November 19 (Wednesday)

**Expectations:** Some of you may find econometrics very challenging, but with diligence and dedication all of you can earn a good grade. I encourage you to see me during office hours, both alone and in groups. To ease your HW and exam preparation, I hand out notes; I post slides and make announcements on *Blackboard*. Check the site regularly!

	Times per week	14 weeks	Hours	
In-class time			30	
Syllabus review			1	
Reading	4		56	
HW	3		42	
Evening Reviews			5	
Simple Regression Pro	ject		10	
Multiple Regression Pro	oject		20	
Final Project			<u>10</u>	
Total			174	
Grading:	Homework (text)		6%	
	Lab exercises		4%	
	Simple Regression Pro		10%	
	Multiple Regression Pro	oject	20%	
	Four Exams		60%	
Grading Scale:				
	93 - 100: A	90 - 92.99: A-		
87 - 89.99: B+	83 - 86.99: B	80 - 82.99: B-	•	
77 - 79.99: C+	73 - 76.99: C	70 - 72.99: C		
67 - 69.99: D+	63 - 66.99: D	60 - 62.99: D	•	00 - 59.99: F

I usually **curve** the exams (up to 100%) to give half the class As and Bs (and half C or less).

#### **Attendance Policy:**

I urge you to come to class regularly! Attendance does not enter your grade directly, but it has a large impact indirectly. It allows you to participate, learn from your classmates, and get a better sense of what is important. Moreover, the lectures and the text reinforce one another.

### **Academic Honesty Policy:**

I encourage you to study in groups and to discuss all homework, but you must write the names of all students in the group on your homework **and** you must write your own answers to earn any credit. If you work in groups, acknowledge it, yet provide the same answers, you earn one credit for the entire group. The following rule holds for both homework and exams: If you copy an answer from another student or if you let another student copy from you, you will receive **zero** for the whole assignment or exam. Note that the punishment is the same for both parties.

Beware of **plagiarism!** If you are lifting phrases (of more than <u>three consecutive</u> words) or entire definitions from the textbook, the web, or any other source, use quotation marks and provide the page number, the URL, or the source citation. If you fail to use quotes, you will get **zero** for the HW. Read the college academic honesty policy at <a href="http://www.moravian.edu/studentLife/handbook/academic/academic2.html">http://www.moravian.edu/studentLife/handbook/academic/academic2.html</a>

# **Special Accommodations:**

Students who wish to request accommodations in this class for a disability must contact Ms. Elaine Mara, assistant director of academic support services for academic and disability support, at the lower level of Monocacy Hall, or by calling 610-861-1401. Accommodations cannot be provided until authorization is received from the Academic Support Center.

# Schedule

Week of: August 25	Topics Regression Analysis	Text Chapter 1
September 1	Lab: Multiple regression using Excel; Dummy variables Ordinary Least Squares	RATE1 Chapter 2
(no Labor Day)	Gary Smith: Statistics for Liberal Arts Students Home Lab: SPSS handout	FINAID2
September 8	Using Regression Lab: R <sup>2</sup>	Chapter 3 IPOD3
September 15	The Classical Model Exam 1 (9-17-14) Lab: Different samples: different estimates; return exam	Chapter 4 Chapters 1-3 DRINKS4
September 22	Hypothesis Testing Data for simple regression (9-24-14) Lab: Start project	Chapter 5
September 29	Choosing Variables Running Your Own Regression Project Lab: Creating bias	Chapter 6 Chapter 11
October 6	Review Exam 2 (10-8-14) Lab: Return exam	Chapters 4-6 Chapters 4-6
October 13 (1 class & lab)	Fall Break Choosing a Functional Form Lab: Functional forms	Chapter 7 HOUSE11
October 20	Multicollinearity Simple regression project (10-22-14) Lab: Diagnosing multicollinearity	Chapter 8 SAT8
October 27	Serial Correlation Heteroskedasticity Data for multiple regression (10-29-14)	Chapter 9 Chapter 10
November 3	Lab: Creating data with random and correlated errors  Time-Series Models  Dummy Dependent Variables  Exam 3 (11-5-14)  Lab: Return exam	DODGERS9 & GAS10  Chapter 12 Chapter 13 Chapters 7-9 MOUSE12
November 10	Dummy Dependent Variables Experimental and Panel Data Multiple Regression (11-12-14) Lab	Chapter 13 Chapter 16 WOMEN13
November 17	Review Exam 4 (11-19-14) Lab: Return exam	Chapters 10-13 Chapters 10-13

November 24 Experimental and Panel Data Chapter 16

(1 class) <u>Thanksgiving Break</u>

December 2 Experimental and Panel Data Chapter 16

Evaluations

December 9 Final project is due at 11:30—no extensions

The syllabus is subject to change—the changes will be posted on *Blackboard*.

National Geographic, June 2012, p. 35