

**ECON 4875, EMPIRICAL LINEAR MODELING  
UNIVERSITY OF NORTH TEXAS  
SPRING 2015**

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Office Hours: Wed. & Thurs.: 1 PM – 4 PM in Hickory Hall 220 E  
Wed. & Thurs.: 5:30 PM – 6:30 PM in or near Gateway 141

**COURSE OBJECTIVES:**

The objective of this course is to provide the tools necessary to analyze, interpret, and develop empirical applications of econometric estimation procedures. We will explore an assortment of applied problems that are typically encountered in real-world quantitative research, with particular attention given to examples typically encountered in the fields of accounting, business, economics, finance and political science. At the completion of the course, you will have developed proficiency in the following areas: (1.) organizing and manipulating data; (2.) estimating linear and intrinsically-linear regression models; (3.) interpreting econometric results and computer output; (4.) engaging in applied research & data analysis; and, (5.) working in SAS.

**PRE-REQUISITE:**

The pre-requisite for this course is a grade of "B" or better in ECON 4870, "Introduction to Econometrics." Since this course builds on material covered in ECON 4870, it is essential that this pre-requisite be met; students who choose to enroll without having met the pre-requisite will have a difficult (if not impossible) time passing this class.

**TEXT/READING MATERIAL:**

This course will draw on material from the primary text from ECON 4870, *Introductory Econometrics*, 5<sup>th</sup> edition (2013), by Jeffery Wooldridge (South-Western Cengage Learning, publishers). It also is acceptable (and cheaper) to use the 4<sup>th</sup> edition (2009) of this text. In addition, your notes from ECON 4870 should be a useful resource for reading material.

**COURSE STRUCTURE:**

The first portion of the class will focus on lecture material. The second portion will be allocated to lab work on computer exercises that focus on the material covered in the lecture. Students are required to work on lab exercises during the lab period and are encouraged to use lab time wisely in order best to learn the techniques discussed in the lecture.

**GRADING SCHEME:**

Assignment:	Points:	
2 homework assignments	50 points each	
Buxton Challenge project, deck & Excel spreadsheet	115 points	
Final exam	100 points	Total points possible = 315

Grades for the course will be based on the total number of points accumulated.

*Homework:*

Homework assignments will focus on applications similar to those discussed in lecture. More details will be provided at a later date.

*Buxton Challenge Project:*

You will work on a regression project provided by Buxton Co., a consulting company in Ft. Worth. You will clean up and analyze a data set, build and estimate a regression model, interpret the output, and make a recommendation to the client on some aspect of their business.

**NOTE: Class attendance is required once work on the project begins.** Further details will be supplied at a later date.

*Final Exam:*

The final exam will take place on the Wednesday evening of finals week, May 13, 2015. The exam will be "closed book" and "closed notes." A limited formula sheet and calculators will be provided.

**CLASSROOM POLICY:**

During lecture and exams, students are forbidden to have or use electronic devices such as a laptop computer, tablet, BlackBerry, cell phone, Bluetooth device, or anything that uses headphones, earphones, ear buds or the like. Exceptions will be made for students who have verifiable disabilities that require such devices, or if computer devices are used exclusively for the purpose of taking notes during lecture.

**INTERNET RESOURCES:**

Be forewarned: If you miss class and you would like to use the internet as a source to learn the missed material, you are strongly cautioned against doing so. There is a wealth of information on the internet that is NOT correct, even though it appears to be. If you collect information from sources other than class lecture and the Wooldridge text, this information might be incorrect and it might cost you points on an assignment.

**SOFTWARE:**

The software package used in this course is PC SAS (Statistical Analysis System), version 9. This software is widely used in industry and academia. Knowledge of this software should give students excellent preparation for either the job market or further academic study. You will not be permitted to use the computers in our classroom (Gateway 141) at any time other than our class period. As long as you have a valid UNT ID, you will be permitted to use any of the general access labs supported by the College of Arts & Sciences, all of which have SAS version 9 available. The chart on the next page shows the location and hours of operation of each of the general access labs supported by the College of Arts & Sciences. You also might be able to access SAS through other labs on campus, but this is not guaranteed by your instructor.

**LOCATION AND HOURS OF OPERATION OF CAS GENERAL ACCESS LABS:**

	GAB 330	GAB 550	Terrill 220	Wooten 120
Monday - Thursday:	8 AM – Midnight	8 AM – 10 PM	8 AM – 10 PM	8 AM – Midnight
Friday:	8 AM – 5 PM			
Saturday:	12 noon – 8 PM	closed	closed	8 AM – 8 PM
Sunday:	12 noon – Midnight	closed	closed	closed
Closed:	January 19 March 14 – 21	January 19 March 14 – 22	January 19 March 14 – 22	January 19 March 14 – 22

For more information, please visit: [http://itservices.cas.unt.edu/services/lab/student-view?building=All&lab\\_type=general-access&macs=All](http://itservices.cas.unt.edu/services/lab/student-view?building=All&lab_type=general-access&macs=All) and <http://itservices.cas.unt.edu/services/lab/holiday-hours-cas-general-access-computer-labs> .

**E-MAIL:**

If I need to contact you to convey class-related information, in keeping with University policy, I **ONLY** will use your official UNT email address. Thus, it is **YOUR** responsibility to check your UNT email on a regular basis. If you send an email to me, please only use your official UNT email account. In addition, I typically receive a large volume of emails each day and so it is not possible for me to read all of my e-mails every day. Therefore, if you send me an email, please keep in mind that I may not get to read it until several days after you send it. If you want to maximize the probability that I will read and respond to your e-mail in a timely manner, you should do the following: (1.) use the phrase "ECON 4875" in the subject heading; (2.) make sure your **FULL NAME** appears in the "from" line; (3.) sign your e-mail using your full name.

**NOTE:**

Lecture outlines and other course material will be made available on Blackboard (when appropriate) approximately one week before class. With the exception of the first night of class, it is **YOUR** responsibility to bring a copy of the lecture outline and other material to class each week; copies of handouts will not be provided for you and you should not expect to print the handouts in the classroom. Please check Blackboard regularly for messages. Also, be aware that **CLASS ATTENDANCE IS NOT OPTIONAL**. If you miss class it is **YOUR** responsibility to find out what was covered on that night and make up the missed material before the next class meeting.

**SEVEN HOUSE RULES:**

1. Do not sit in an area by yourself.
2. No food or drink in the computer lab.
3. Turn off your cell phone, BlackBerry, *et cetera* during class time.
4. Do **NOT** work on the computer during lecture and do **NOT** print anything once lecture has begun.
5. When in this classroom, print **ONLY** material related to this class.
6. Question everything! Always ask "why?" Be curious!
7. When working in SAS, always read the log window **FIRST** (starting at the **TOP**).

**COURSE SCHEDULE, SPRING 2015**

<b>DATE:</b>	<b>TOPIC OF DISCUSSION:</b>	<b>READINGS*:</b>
Jan. 21	Topic #1: Pre-Model Analysis and Introduction to SAS	chapter 1 and sections 2.4, 6.1, 6.2 & 9.5
Jan. 28	Topic #2: Model Selection and Inference in Regression, Part 1	"Cassandra's Open Letter to her Economists Colleagues" by D. McCloskey, and chapters 2–6
Feb. 4	Topic #2: Model Selection and Inference in Regression, Part 2	chapters 2–6
Feb. 11	Topic #3: Reading & Working with Data in SAS, Part 1	handout
Feb. 18	Topic #3: Reading & Working with Data in SAS, Part 2  <b>Receive Homework #1</b>	handout
Feb. 25	Topic #4: Dummy Variables	chapter 7
March 4	<b>Homework #1 due, 3 PM</b> Topic #5: Intrinsically Linear Non-Linear Models	chapter 6 and section 9.1
March 11	<b>Submit PowerPoint slides via e-mail by 3 PM</b> <b>Graduate Student Presentations</b>	
March 18	<b>SPRING BREAK</b>	
March 25	<b>Begin the Buxton Challenge Project</b> <b>Receive Homework #2</b>	
April 1	Topic #6: Probability Models	section 7.5
April 8	Groups work on Buxton Challenge project	
April 15	<b>Homework #2 due, 3 PM</b> Groups work on Buxton Challenge project	
April 22	Groups work on Buxton Challenge project	
April 29	Review for final exam.	
May 6	<b>Buxton Challenge Project (including PowerPoint slides) due, 3 PM</b> <b>Graduate Student Presentations (presentations are optional for undergraduates)</b>	Everything above
May 13	<b>FINAL EXAM</b>	Everything above
Friday May 15	<b>Final PowerPoint Slides &amp; Excel Spreadsheet Due by 3 PM</b>	

\*Readings refer to both the 4<sup>th</sup> & 5<sup>th</sup> edition of the Wooldridge text.

## CHEATING AND PLAGIARISM

**Cheating of any kind (both the giving and receiving of information) is absolutely forbidden in this class. If you engage in any form of cheating, no matter how innocent it may seem to you, I will prosecute you to the fullest extent of the law.**

The UNT Department of Economics adheres to the University's Policy on Cheating and Plagiarism. To view the complete policy go to [www.vpaa.unt.edu](http://www.vpaa.unt.edu)

Cheating: The use of unauthorized assistance in an academic exercise, including but not limited to:

1. use of any unauthorized assistance to take exams, tests, quizzes or other assessments;
2. dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems or carrying out other assignments;
3. acquisition, without permission, of tests, notes or other academic materials belonging to a faculty or staff member of the University;
4. dual submission of a paper or project, or re-submission of a paper or project to a different class without express permission from the instructor;
5. any other act designed to give a student an unfair advantage on an academic assignment.

Plagiarism: Use of another's thoughts or words without proper attribution in any academic exercise, regardless of the student's intent, including but not limited to:

1. the knowing or negligent use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgement or citation.
2. the knowing or negligent unacknowledged use of materials prepared by another person or by an agency engaged in selling term papers or other academic materials.

### Disability Accommodation

If you have a disability for which you will require accommodation under the terms of the Americans with Disabilities Act or Section 504 of the Rehabilitation Act of 1973, please discuss your needs with me after class or at office hours.

The Economics Department cooperates with the Office of Disability Accommodation (ODA) to make reasonable accommodations for qualified students with disabilities. If you have not registered with ODA, we encourage you to do so. Please present your written accommodation request on or before the 4th class day.

### ACCEPTABLE STUDENT BEHAVIOR:

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Center for Student Rights and Responsibilities to consider whether the student's conduct violated the Code of Student Conduct. The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at [www.unt.edu/csrr](http://www.unt.edu/csrr).