

Darren Grant—please call me Mr. Grant
ECON 3318, Intro to Econometrics
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8:00-10:00 M-Th, July 5-Aug. 8
Office Hours: 10:00-10:30, M-Th.,
by appointment or whenever the door is open
<http://economics.uta.edu/grant>

Course Objectives. Econometrics is about using data to test economic theories, predict future values of economic variables, and describe patterns in markets or economic systems. Successful use of econometrics requires all of the following: an understanding of economic theory, an understanding of econometric theory, technical skill in analyzing the data on computers, and good judgement. The ability to successfully analyze data using econometrics is valuable on the job market, in undertaking graduate study in business or economics, or in reading and evaluating statistical work in any number of fields, from economics to medicine to political science to law.

Little economic theory will be taught in this class; familiarity with principles-level theory will be assumed. All the other skills listed above will be developed in this class.

Prerequisites. Prerequisites for this class are BUSA 3321, Business Statistics (which itself has a prerequisite of algebra or higher), or MATH 3313, Introduction to Probability and Mathematical Statistics (which has a prerequisite of calculus). Thus, I assume you are familiar with fundamental statistical principles and have basic algebra skills. I also assume you have elementary computer skills, such as familiarity with Windows. The text is Studenmund, *Using Econometrics*, 5th ed. This is also an economics class—I presume you know the principles of microeconomics and macroeconomics. We will investigate applications of econometrics to a wide variety of economic topics, including macro, micro, labor, health, industrial organization, real estate, and international development.

Plan for the Course. The course material is organized into two large units. The first is basic regression theory. In basic regression theory, certain assumptions are made about the data you are analyzing. The second unit considers what happens when these assumptions do not hold. Each unit is five chapters in length.

In this class we learn by *doing*, mostly, not by *watching*. There are three skills I wish to develop, and there is something to do for each. To develop your knowledge of econometric theory, you will be assigned generous amounts of written homework, some of which will be graded. To develop your ability to do econometrics on computers, we will regularly go to the computer lab to analyze real data. Some of this work will be graded as well. Finally, I attempt to impart good judgement in the use of econometrics both in the exercises we will do and, if time permits, by reading and evaluating econometric work that has been done by real economists, myself included.

There are four tests—a midterm and a final, each with a “theory” component and an “applied” (computer) component. Both components will be similar in style and substance to the homeworks/exercises that are given out and gone over in class.

Grading Policy. Your final numerical average is determined by the following formula:

3 Homeworks at 10% each:	30%
Midterm–Applied Portion:	20%
Midterm–Theory Portion:	20%
Final Exam–Applied Portion:	15%
Final Exam–Theory Portion:	15%

The midterm counts more than the final because it covers more material. Course grades are assigned using the standard ten point scale. That is, A = 90-100, B=80-89, C=70-79, D=60-69, F = 0-59. I reserve the right to round fractions of a point up or down at my discretion. If you regularly attend class and participate, this will work in your favor.

There is no attendance policy. But this material is not easy, I'm not an easy grader, and summer moves very fast, so I'd plan on attending regularly.

Academic Honesty. It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. "Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22)

Grade Grievances. You have one calendar year from the date the grade is assigned to initiate any grievance. The normal academic channels are department chair, academic dean, and the Provost.

Make-up Exams. Let's not go down this road unless we really, really need to. Valid excuses are the biggies, only: death in the family, illness with *doctor's* excuse, and the like. If you miss a test for an acceptable reason, I will either (at my option): 1) drop the test and compute your numerical average with a simple average of the remaining grades, or 2) give you a different test on the same material. If you miss an exam for an unexcused reason, I will give you a score of 30/100 for that exam. (I never let test scores go below 30.)

Drop Policy. It is the student's responsibility to complete the course or withdraw from the course in accordance with University Regulations. Students are strongly encouraged to verify their grade status before dropping a course after the first withdrawal date. A student who drops a course after the first withdrawal date may receive an "F" in the course if the student is failing at the time the course is dropped.

Nonpayment of Fees. Students who have not paid by the census date and are dropped for non-payment cannot receive a grade for the course in any circumstances. Therefore, a student dropped for non-payment who continues to attend the course will not receive a grade for the course. Emergency loans are available to help students pay tuition and fees. Students can apply for emergency

loans by going to the Emergency Tuition Loan Distribution Center at E.H. Hereford University Center (near the southwest entrance).

Bomb Threats. Effective April 8, 1997, the College of Business Administration has adopted a policy to deal with the classroom disruption caused by bomb threats in the building. (A) Section 22.07 of the Texas Criminal Law Statutes governs terrorist threats and classifies bomb threats as Class A misdemeanors. Section 12.21 of the Texas Criminal Law Statutes states that a Class A misdemeanor is punishable by (1) a fine not to exceed \$4,000, (2) a jail term of not more than one year, OR (3) both such a fine and confinement. (B) If anyone is tempted to call in a bomb threat, be aware that UTA will soon have technology to trace phone calls. (C) Every effort will be made to avoid cancellation of presentation/tests caused by bomb threats to the Business Building. Unannounced alternate sites will be available for these classes. If a student who has a class with a scheduled test or presentation arrives and the building has been closed due to a bomb threat, the student should immediately check for the alternate class site notice which will be posted on/near the main doors on the south side of the Business Building. If the bomb threat is received while class is in session, your instructor will ask you to leave the building and reconvene at another location. (D) Students who provide information leading to the successful prosecution of anyone making a bomb threat will receive one semester's free parking in the Maverick Garage across from the Business Building. UTA's Crimestoppers will provide a reward to anyone providing information leading to an arrest. To make an anonymous report, call 817-272-5245.

ADA Compliance. It is my obligation and my pleasure to provide reasonable accommodation to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.

Cell Phones. All beepers, pagers and cell phones must either be turned off prior to class starting or placed in silent mode. Violators of this policy will be forced to sing that new Tainted Love re-mix in front of all of your classmates. I'll do the background vocals.

Schedule. Each lecture will take about an hour; the second hour of will consist of time in the computer room to work on the computer exercises.

Unit 1: Fundamentals

July 5: Uses of Econometrics (Ch. 1)

July 6: Formal Regression Notation (Ch. 1)

July 10: Estimating OLS (Ch. 2)

July 11: Interpreting OLS (Ch. 2)

July 12: Applied Regression Analysis (Ch. 3)

July 13: Discuss Homework, Get Ready for Test * Homework 1 due

July 17: Test 1: Theory Portion

July 18: The Seven Classical Assumptions (Ch. 4)

July 19: Properties of OLS under the Seven Classical Assumptions (Ch. 4)

July 20: Hypothesis Testing (Ch. 5)

July 24: Discuss Homework, Get Ready for Test * Homework 2 due

July 25: Test 1: Applied Portion

Unit 2: Econometric Methods in Application

July 26: Deviating from the Classical Assumptions

July 27: Specification: Variables (Ch. 6)

July 31: Specification: Functional Form (Ch. 7)

Aug. 1: Multicollinearity: Theory (Ch. 8)

Aug. 2: Multicollinearity: Testing and Estimating (Ch. 8)

Aug. 3: Problems with the Error Term (sections 9.1, 9.2, 10.1, 10.2), Wrap Up * Homework 3 due

Aug. 7: Test 2: Theory Portion

Aug. 8: Test 2: Applied Portion