

ECONOMETRICS

ECON 3341 - 01 FALL 2016

Course & Instructor:

Instructor: Dr. Diego Escobari

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Office Hours: MWF 10:40 a.m. – 12:00 p.m., and by appointment

Lecture Time: MW 9:25 a.m. - 10:40 a.m.

Lecture Venue: Business Administration Building 116

Course Description:

This is an introductory course to econometrics. Topics of discussion will include, but are not limited to, application of mathematics and statistics to interpret economic phenomena; elementary econometric models and estimation techniques useful for estimating economic relationships and theories. The students should get the skills of construction and development of simple and multiple regression models. The considered methods and models should be mastered practically on real economic data with Microsoft Excel and Gretl.

Prerequisites:

ECON 2301, ECON 2302, and MATH 1322 or QUMT 2340.

REQUIRED TEXTBOOK:

Introduction to Econometrics, by Christopher Dougherty, Oxford University Press, 5th Edition ISBN-13: 9780199676828 (4th Edition ISBN-13: 9780199567089 also works).

TENTATIVE LECTURE SCHEDULE:



| Dates | Material |
|-------------------------------------|--|
| Aug 29 – Aug 31 | Review: Random Variables, Sampling and Estimation (Ch. R) |
| Sep 5 – Sep 12 | Simple Regression Analysis (Ch. 1) |
| Sep 21 | Capstone Micro Exam (during class time) |
| $\mathrm{Sep}\ 14-\mathrm{Sep}\ 26$ | Properties of Regression Coefficients and Hypothesis Testing (Ch. 2) |
| Sep 28 | Capstone Macro Exam (during class time) |
| Oct 3 | List of Poster Groups Due (at the beginning of class) |
| Oct 5 – Oct 12 | Multiple Regression Analysis (Ch. 3) |
| Oct 12 | Assignment 1 Due (at the beginning of class) |
| Oct 12 | Review for Exam 1 |
| Oct 17 | Exam 1 (during class time) |
| Oct 19 | Draft Term Paper/Poster Due |
| Oct 19 – Oct 26 | Transformation of Variables (Ch. 4) |
| Oct 31 – Nov 7 | Dummy Variables (Ch. 5) |
| Nov 2 | Poster Presentations |
| Nov 9 | Border Economics, Development and Entrepreneurship Symposium |
| Oct 14 – Nov 16 | Specification Regression Variables (Ch. 6) |
| Nov 21 – Nov 23 | Heteroscedasticity (Ch. 7) |
| Nov 28 – Nov 30 | Binary Choice Models (Ch. 10) |
| Nov 30 | Assignment 2 Due (at the beginning of class) |
| Dec 5 | Review for Exam 2 |
| Dec 7 | Exam 2 (during class time) |
| Dec 14 | Term Paper Due (final exam date, 8:00 a.m.) |

GRADING STRUCTURE:

Your grade in the class will be determined based on:

| Econometrics | Each | Total |
|--------------------------------|-------------|-------------|
| 2 Exams | 22% | 44% |
| 2 Assignments | 7% | 14% |
| 1 Draft Term Paper/Poster Idea | 4% | 4% |
| 1 Poster | 12% | 12% |
| 1 Poster Presentation | 6% | 6% |
| 1 Term Paper | 20% | 20% |
| Extra points | | 100% |
| - | 5% | 5% |
| 1 Capstone Micro & Macro Exams | 3 /0 | |
| | | 105% |

No additional credit will be given. The cutoffs for the A-F grading system are given by:



 $90.00 - 100.0 \Rightarrow A$ $80.00 - 89.99 \Rightarrow B$ $70.00 - 79.99 \Rightarrow C$ $60.00 - 69.99 \Rightarrow D$ $0.00 - 59.99 \Rightarrow F$

EXAMS:

There are two non-cumulative exams in this class. No notes, books, coats, backpacks, etc. are to be at your desk during the examinations. You can bring a basic calculator, but you may not need it. You must have a valid University excuse in order to take a make-up exam. You need to schedule your make-up exam at the time you first know that you will not be taking the exam.

Assignments:

The two problem sets assigned during the semester will have an important component of computer-based exercises. You will be learning regression analysis in Excel and Gretl in this class, but you are welcome to work with any other software for the computer assignments (e.g., SPSS, Stata, EViews). Late assignments will never be accepted without a valid University excuse. I encourage you to work in groups and you can submit your answers in groups of up to three students. Make sure to submit the printed answers for the computer output. Photocopies will not be acceptable. If you need help, do not hesitate to ask me during my office hours. You should view the assignments as part of your preparation for the exams.

EMPIRICAL PROJECT:

The empirical project should employ the econometric methods we covered in the course. Moreover, it contains two components: (1) a group poster presentation, and (2) a term paper.

- 1. Poster Presentation: There is one group poster presentation. Groups are expected to prepare one poster and present it during class time. Groups can be formed by 6 to 8 students and the topic and analysis can be the same as in the individual term papers. Note that there is a due date for the draft poster and also a due date for the list of the group members. The best poster presentations will be selected to be part of the Border Economics, Development and Entrepreneurship Symposium (BEDES) to be held on November 9, 2016. Notice that while poster presentations are in groups, each member in the group has to submit his/her own term paper. More detailed instructions about the poster and the presentation will be given during class.
- 2. TERM PAPER: Each student needs to write his/her own paper in this class. You are allowed to use the same data you used in your poster. Detailed instructions for the



term paper are posted in the class website, including a mock term paper and data sets that you can use.

CAPSTONE MICRO AND MACRO EXAMS:

This Econometrics class is the capstone in the BA and BBA in Economics programs. For accreditation (e.g., AACSB and SACS) and program evaluation purposes the College of Business and the University need to keep track and evaluate a number of learning objectives using material embedded in this class. For example, the term paper serves to evaluate the writing. One of the BA and BBA in Economics program objectives is, of course, knowledge in Microeconomics and Macroeconomics. To evaluate this goal all BA and BBA in Economics majors must take both exams. These exams count 5 extra points towards your final grade. To make sure all students can get the extra points, non-econ majors also need to take both exams. Notice that these exams are at the level of ECON 2301 and ECON 2302 classes, which are prerequisites for this Econometrics class.

SOFTWARE:

The econometric methods we learn in this course will all have empirical examples that we will cover in class using the software Gretl. You might also need this software to work on your assignments and term paper. Gretl is an open source (free) software that can be downloaded from: http://gretl.sourceforge.net Make sure you download the correct version depending on you Operating System (e.g., Windows or Mac OS) and whether you have a 32-bit or a 64-bit computer.

TIPS TO SUCCEED IN THIS CLASS:

- 1. First of all, you should attend class. The organization of the lectures will follow the suggested textbook and the class notes available on the class website, so reading them before class will make the material easier to understand. After classes you should read your notes and the book again. If anything is unclear, you should read the book again. Dont wait until last minute and leave time to get help if needed.
- 2. I encourage you to come to my office hours if you have question about the material. If you cannot make it to the office hours send me an e-mail with your schedule availability.
- 3. All the material will be posted in the class website. You are encouraged to visit the website frequently as I will post there the assignments, solutions to the assignments, solutions to the exams, and datasets.

LEARNING GOALS:



BBA Learning Goals:

| BBA Learning Goals: | This course contributes to the following College of Business and En- trepreneurship learning goals: | How is measured: |
|---|---|-----------------------|
| · Demonstrate foundational knowledge of | X | Term paper and exams |
| functional area concepts and theories. | | |
| · Demonstrate effective business communica- | X | Term paper and poster |
| tion skills. | | presentation |
| · Apply sustainable practices (economic, social | | |
| and ethical, and environmental) to business | | |
| decision-making. | | |
| · Demonstrate an understanding of how glob- | X | Exams |
| alization, including conditions on the US- | | |
| Mexico border, shape effective business deci- | | |
| sion making. | | |
| · Apply quantitative analytical skills to busi- | X | Term paper and exams |
| ness decision-making. | | |
| \cdot Demonstrate the ability to critically analyze | X | Term paper and poster |
| business issues. | | presentations |

BA and BBA in Economics Major Learning Objectives:

| BA and BBA in Economics Major Learning Objectives: | This course contributes to the following Department of Economics and Finance | How is measured: |
|--|--|-------------------------|
| | learning objectives: | |
| · Written communication skills. | X | Term paper, assignments |
| · Analytical skills. | X | Terms paper, exams |
| · Current global awareness. | X | Capstone Micro and |
| - | | Macro exams |
| · Knowledge of Economics. | \mathbf{X} | Capstone Micro and |
| | | Macro exams |

IMPORTANT UNIVERSITY DATES:

The UTRGV academic calendar can be found at http://my.utrgv.edu at the bottom of the screen, prior to login. Some important dates for Fall 2016 include:



| Aug 29 | Fall classes begin |
|-----------------|--|
| Sept 1 | Last day to add or register for Fall classes |
| Sept 2 | Last day to withdraw (drop all classes) for a 80% refund |
| Sept 5 | Labor Day Holiday, no classes |
| Sept 14 | Census day |
| Nov 17 | Last day to drop (DR grade) a class or withdraw (grade of W) |
| Nov 18 – Dec 8 | Online course evaluations available |
| Nov 24 – Nov 25 | Thanksgiving Holiday, no classes |
| Dec 8 | Study Day, no classes |
| Dec 9 – Dec 15 | Final Exams |

MANDATORY COURSE EVALUATION:

Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (http://my.utrgv.edu); you will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades. Online evaluations will be available:

| Oct 5 – Oct 12 | for Module 1 courses |
|----------------|--------------------------------|
| Dec 1 - Dec 7 | for Module 2 courses |
| Nov 18 – Dec 8 | for full fall semester courses |

STUDENTS WITH DISABILITIES:

If you have a documented disability (physical, psychological, learning, or other disability which affects your academic performance) and would like to receive academic accommodations, please inform your instructor and contact Student Accessibility Services to schedule an appointment to initiate services. It is recommended that you schedule an appointment with Student Accessibility Services before classes start. However, accommodations can be provided at any time. **Brownsville Campus:** Student Accessibility Services is located in Cortez Hall Room 129 and can be contacted by phone at (956) 882-7374 (Voice) or via email at ability@utrgv.edu. **Edinburg Campus:** Student Accessibility Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), or via email at ability@utrgv.edu.

SCHOLASTIC INTEGRITY:

As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism, and collusion; 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. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to the Dean of Students.

SEXUAL HARASSMENT, DISCRIMINATION AND VIOLENCE:

In accordance with UT System regulations, your instructor is a "responsible employee" for reporting purposes under Title IX regulations and so must report any instance, occurring during a students time in college, of sexual assault, stalking, dating violence, domestic violence, or sexual harassment about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity, including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect in an environment free from sexual misconduct and discrimination.

Course Drops:

According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the "3-peat rule" and the "6-drop" rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.