I. Course Description
This course introduces the theory and practice of quantitative data analysis techniques by focusing on regression analysis. The basic purpose of this course is to maximize your research skills as a political scientist. From this course students will learn econometric models and their limitations. In particular, this course focuses on ordinary least squares as a method for estimating the unknown parameters in linear regression models. Statistical and mathematical concepts are introduced and discussed in class to explain econometric models and methods. In addition, students are required to carry out data analysis. STATA is used for data analysis. After taking this course, students will be able to read, understand, interpret, and evaluate statistical models and results in journal articles and conduct their own studies by applying the techniques discussed in class.

II. Objectives of the Course
At the end of the semester, Students can be expected to learn: (1) how to employ common methodologies in political science, (2) to critique major theses (research design and methods) in political science; (3) to test theories with empirical data; and (4) to conduct their own research by running regression models.

III. Required Texts & Software
- STATA (https://www.stata.com)
- Mohr, Lawrence B. 1990. Understanding significance testing. Vol. 73. Sage

IV. Requirements:
1) Homework: The best way to learn the material is to use the estimators. I will assign homework on a weekly to bi-weekly basis. Most of the assignments will write some STATA syntax. When you turn in the homework, I want you to upload an electronic copy of your Stata batch file with the dataset. I will run the batch file on my computer without modification (e.g., no full path directives). I will not spend time debugging your code just to get the file to run completely. Late homework will lose ten percent of the total value per week unless prior arrangements are made. Every homework is due at the beginning of class. You have homework every week!
2) **STATA:** You must bring your laptop with the STATA.

3) **Final project proposal:** you will write up two proposals for your final project over the course of the semester. The first proposal will be in the form of a short conference-style proposal outlining your intended project (about 300 words). The second one will represent a longer description (about 1,000 – 1,500 words and overview of the method you propose to use.

4) **Class Presentation:** During the last two weeks of the semester, class members will present the results of their final research project to the class in conference format (20-minute presentation + 10 min Q&A) using a power point (of beamer) presentation. The presentation should clearly deliver research question, relevant literature review, theory and hypothesis, estimation method, data operationalization, and results. The focus of the presentation should involve either the application of a suitable, advanced method to a substantive research question (beyond OLS regression). Presentations must also meet the following criteria (adapted to the three options as appropriate):
   a. No fewer than 5 and no more than 15 slides.
   b. One slide must explain why the primary method allows an improvement over previous studies or how the primary method permits appropriate testing of novel hypotheses.
   c. One slide must present a graphical (or tabular, but only if necessary) interpretation of the main result.
   d. One slide must indicate the primary hypothesis being tested.
   e. One slide must clearly indicate the data and/or methods employed.

5) **Final paper:** you are responsible for submitting a 20-25 page final paper modeled as published research in political science. This is the most important assignment of the semester. The paper should include an appropriate introduction, literature review and discussion of how you are extending previous research in this area, testable research hypotheses, a discussion of your data and methods, results section and a conclusion. Please do not wait to write this paper until the very end of the semester, as it will not be as polished as it should be. Make sure to have a graphical presentation of your substantive findings.

6) **Replication materials:** you will submit a complete set of replication materials through Blackboard at the end of the semester. These files must allow anyone to replicate your results without consulting you and should run on any computer with Stata installed. You should use comments liberally to help users follow your code on the batch file. At a minimum, your replication materials should include: (1) The Stata do-file that you used to construct your data set so that others can see your coding decisions. (2) Your final data set (you do not need to supply the original, raw data set(s)), and (3) a Stata do-file to run all the analysis in your paper.

**IV. Grading:** Grades will be based on four parts:
- homework assignments (30%)
- 2 Exams (20%)
- 2 proposals (10%)
- Research presentation & replication materials (20%)
- Final paper (20%).

**V. Grading Scheme:** I will assign grades on a scale of A through F.

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<thead>
<tr>
<th>Score</th>
<th>Grade</th>
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<tbody>
<tr>
<td>100 – 90:</td>
<td>A</td>
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<tr>
<td>89 – 80:</td>
<td>B</td>
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<td>79 – 70:</td>
<td>C</td>
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<tr>
<td>69 – 60:</td>
<td>D</td>
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<tr>
<td>59 - 0:</td>
<td>F</td>
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VI. Calendar of Activities

**Week 1  Political Methodology: Theory vs. Empirical Analysis (Jan 15)**
- **Required:**

**Week 2  Basics in Statistics (Jan 22)**
- **Required:**

**Week 3  Measures of Associations & OLS I (Jan 29)**
- **Exam 1 Two variable regression coefficient**
- **The first research proposal (300 words)**
- **Required:**

**Week 4  Regression Analysis II (Feb 5)**
- **Exam 2 Multivariate regression coefficient**
- **Required:**
  - Kellstedt, Paul M., and Guy D. Whitten. 2018 *The fundamentals of political science research*. Cambridge University Press. [Chapter 9]

**Week 5  Limited Dependent Variable I (Feb 12)**
- **Required:**

**Week 6  Limited Dependent Variable II (Feb 19)**
- **Required:**
Week 7  Regression Assumption I: No specification error (Feb 26)

- The second research proposal (1,000 – 1,500 words)
- Required:

Week 8  Regression Assumption II: No Endogeneity (Mar 5)

- Required:

S. Break  Spring Break (Mar 12)

Week 9  Regression Assumption III: No Measurement Error (Mar 19)

- Required:

Week 10  Regression Assumption IV: No Autocorrelation (Mar 26)

- Required:
  - Li, Quan. 2009. "Democracy, autocracy, and expropriation of foreign direct investment." Comparative Political Studies 42 (8): 1098-1127.

Week 11  Advanced Topics I: Nominal Independent variable and interactions (April 2)

- Required:

**Week 12  Advanced Topics II: Multiplicative Interactions (April 9)**

- Required:

**Week 13  Advanced Topics III: Estimating Curvilinear relationship (April 16)**

- Required:

**Week 14  Presentation (April 23)**

- In-class presentation: 20 min presentation + 10 min Q&A

**Week 15  Presentation (April 30)**

- In-class presentation: 20 min presentation + 10 min Q&A

**Week 16  Final Week (Final Paper)**

- Final paper & replication materials due: May 6th

**VII. Other Course Information**

A. **Office Hours:** I will hold regular office hours as noted at the top of the syllabus or will schedule extra office hours by appointment upon request. During these office hours, you are encouraged to bring any problems, concerns, or questions from the class to me, and I will do my best to solve or answer them. This is the best way to get any help you need early in the class, and I want to help you enjoy this class, and get the most out of it that you can.

B. **Make-Up Exams:** Make-up exams are only given in this class in extenuating circumstances and with proof of that circumstance. Proof, for instance, consists of the speeding ticket you received, your hospital admittance paper, or a relevant obituary. Requests for make-up exams should be made to Dr. Kim directly and MUST BE MADE BEFORE THE EXAM TAKES PLACE. This means if you do not show up for the exam without notifying me ahead of time, you will NOT receive a make-up exam.
C. **Reading Assignments**: Reading assignments are given in the calendar of activities section in this syllabus. I expect you to have done the reading for each class ahead of time, and I reserve the right to quiz you if I feel you are not doing the reading ahead of time. Reading assignments are subject to change, and any change will be announced in class.

D. **Cheating/Plagiarism**: I do not tolerate cheating or plagiarism in any manner. Please see the CLAS policies sheet attached to this syllabus for more information.

E. **Other Stuff**: I recommend turn your **cell phone** off before you enter the classroom. If I see it twice, you will be asked to leave the classroom. **Laptops** are welcome for note taking in the classroom. However, I expect that if your laptop is out during class, you will be taking notes rather than checking your email or playing solitaire. If I notice that things other than note-taking are going on, you will be asked to put the laptop away and take notes in longhand. Please do not pack up before I say that class is over. If this becomes a problem, pop quizzes or similar will be your new end of class activity. When using email, please conduct yourself in a professional manner, and if you use an email address other than your @utrgv.edu account, please identify yourself in the subject line.
UTRGV Policy Statements

STUDENTS WITH DISABILITIES:
Students with a documented disability (physical, psychological, learning, or other disability which affects academic performance) who would like to receive academic accommodations should contact Student Accessibility Services (SAS) as soon as possible to schedule an appointment to initiate services. Accommodations can be arranged through SAS at any time, but are not retroactive. Students who suffer a broken bone, severe injury or undergo surgery during the semester are eligible for temporary services.

Pregnancy, Pregnancy-related, and Parenting Accommodations
Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related condition, or parenting (reasonably immediate postpartum period) are encouraged to contact Student Accessibility Services for additional information and to request accommodations.

Student Accessibility Services:
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.

Mandatory Course Evaluation Period:
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 on or about:

- Module 1: February 13 – 19
- Module 2: April 10 – 16
- Full Fall Semester: April 10 – May 1

Attendance:
Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences. UTRGV’s attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

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 (including self-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 student’s 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 that is 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.

STUDENT SERVICES:
Students who demonstrate financial need have a variety of options when it comes to paying for college costs, such as scholarships, grants, loans and work-study. Students should visit the Students Services Center (U Central) for additional information. U Central is located in BMAIN 1.100 (Brownsville) or ESSBL 1.145 (Edinburg) or can be reached by email (ucentral@utrgv.edu) or telephone: (888) 882-4026. In addition to financial aid, U Central can assist students with registration and admissions.

Students seeking academic help in their studies can use university resources in addition to an instructor’s office hours. University Resources include the Learning Center, Writing Center, Advising Center and Career Center. The centers provide services such as tutoring, writing help, critical thinking, study skills, degree planning, and student employment. Locations are:

- Learning center: BSTUN 2.10 (Brownsville) or ELCTR 100 (Edinburg)
- Writing center: BLIBR 3.206 (Brownsville) or ESTAC 3.119 (Edinburg)
- Advising center: BMAIN 1.400 (Brownsville) or ESWKH 101 (Edinburg)
- Career center: BCRTZ 129 (Brownsville) or ESSBL 2.101 (Edinburg)