PSCI 3301/SOCI 3305: Research Methods in the Social Sciences, Fall 2008

Section 101: MW 1:00–2:15 p.m., 117 Cowart Hall (BCH)
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Office: 313 Lamar Bruni Vergara Science Center (LBVSC)
Hours: MWF 9:00–10:00 a.m., MW 2:30–3:15 p.m., Tu 6:00-7:30 p.m., or by appointment
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The purpose of this course is to train students in how to analyze political and social phenomena in a rigorous and scientific manner. This knowledge requires an understanding of two different components: research design and statistics.

In the first component, students will learn how to discriminate between theories, pose proper research questions, construct a relevant hypothesis, make valid causal inferences, operationalize concepts, and test their hypotheses. The latter component offers the student a "statistical toolbox" to use as he or she pursues the scientific study of the social sciences. This component covers quantitative topics such as central tendency and dispersion, measures of association, and regression analysis, using both manual computation and computer software.

Above all else, it is my hope that this course will whet your appetite for the study of politics and sociology as a *science*, and thus prepare you to better understand the content of future classes in the social sciences and perform your own inquiries into political and social phenomena.

To succeed in this class, you should have already completed the college's requirement of six hours in college-level mathematics, including at least one course in college algebra.

Student Learning Objectives: Ideally, at the conclusion of this course, you will have a greater understanding of

- the scientific foundations of social inquiry.
- the problems associated with measuring social phenomena.
- how to translate abstract concepts into measurable variables.
- how to test hypotheses about the relationships between variables.
- the appropriate tests for relationships among variables.
- how to consume and produce social scientific research.
- how to select appropriate research topics.
- how to produce a *literature review* of existing research.

Required Materials: There are **two** books required for this course:

- W. Phillips Shively. 2009. *The Craft of Political Research,* 7th ed. Upper Saddle River, N.J.: Pearson Prentice Hall. ISBN 978-0-13-602948-9.
- Stephen P. Schacht and Jeffery E. Aspelmeier. 2005. *Social and Behavioral Statistics: A User-Friendly Approach,* 2nd ed. Boulder, Col.: Westview. ISBN 978-0-8133-4168-2.

Both of these textbooks should be available, new and used, at the TAMIU Bookstore in the Student Center; you may also be able to order them on-line at a discount.

Additional readings may be assigned at the discretion of the professor and will be provided for you at the library reserve desk, on the course Angel site, or as handouts in class.

You will also need a scientific, financial, or statistical calculator if you do not already have one—it will need to be capable of calculating square roots, logarithms, and e^x (aka $\exp(x)$).

Assignments and Grading: Your grade in this course will be based on the following elements:

Research Design Paper	20%
Midterm Exam	30%
Final Exam	30%
Homework and Lab Exercises	15%
Attendance and Participation	5%

Your final grade in the course will be assigned based on this scale:

Final Average	≥ 90.0	≥ 80.0	≥ 70.0	≥ 60.0	< 60.0
Grade	A	B	C	D	F
Grade Points	4.0	3.0	2.0	1.0	0.0

Exams: The exams will be open-book, in-class examinations, consisting of short-answer questions and statistical problems. The midterm exam will cover topics covered up to that point in the course; per college policy, the final exam is *comprehensive*.

On the quantitative portions of both exams, you will be expected to *show all your work*. If you do not show sufficient work to indicate how you arrived at your answer, you will not receive any credit for that question, even if your answer is mathematically "correct."

Research Design Paper: The research design paper will be approximately 10–12 pages in length in which you will propose an empirical, quantitative research project in political science or sociology, broadly defined.

You will turn in the paper topic on the date indicated on the syllabus. After selecting an appropriate topic, in your paper you must:

1. explain the relevance of the topic;
2. conduct a literature review critiquing *at least ten* items of previous literature on (or directly related to) the topic, the majority of which must have appeared in academic journals or scholarly books; and
3. propose a hypothesis (or hypotheses) and explain how this hypothesis (or these hypotheses) will be tested.

Your paper must be an individual effort; you may consult with me, the TAMIU Writing Center, other faculty members, or other students, but the writing and research must be substantially your own work. The paper will be due on the last day of the course.

The body of your paper should be double-spaced and written using a proportional typeface (either 11 point or 12 point), with one-inch margins and including page numbers.[1] You should include a title page with the date, title, and appropriate identifying information.

The paper must consistently utilize the citation style of the American Political Science Association or American Sociological Association, include a full bibliography listing the works cited in your paper, and be written in standard English using coherent prose and acceptable grammar. Please refer to *The Style Manual for Political Science* published by the APSA for a complete guide to the proper use of APSA style; similarly, the ASA has published the *ASA Style Guide*.

Homework and Lab Assignments: The statistical portion of the class will include regularly-scheduled homework assignments, designed to improve your understanding of the material presented in the lecture. The assignments will generally be due at the beginning of the

[1] Proportional typefaces include Times New Roman, Arial, Calibri, Garamond, etc. "Typewriter-style" (constant-width) typefaces such as `Courier New` are not acceptable.

following class period. Any variations in this schedule will be announced when the assignment is given.

Homework assignments, unlike the exams, will primarily be graded on the basis of whether or not a reasonable effort was made to correctly answer the problems (correctness is a secondary consideration). It is in your best interest—both in terms of your grade on the homework, and your performance on the exams—to complete these assignments to the best of your ability.

Class Policies: I make it a general policy to treat all students as adults. While this affords you, the student, greater freedom than you may have had in high school, it also means that you must take a greater personal responsibility for your performance in the course. I am always happy to meet with students to discuss their concerns about the course, but I will not necessarily assume that you are in difficulty simply because you perform poorly on a homework assignment or disappear from class for a few days.

Please provide a respectful learning environment for your fellow students. Repeated tardiness, cell phone disruptions, reading materials unrelated to the course (such as the student newspaper), and abuse of communication technologies (e.g., web browsing/IMing/texting during class) during class will adversely affect your participation grade; per university policy, repeated disruptive behavior may result in your involuntary withdrawal from the course.

Please arrive at class *on time* and mute (or switch off) all pagers, cell phones, and alarms during class.

Make-up examinations must be scheduled two weeks in advance in the case of an **unavoidable** planned or reasonably-forseeable absence; otherwise, make-ups will be given only in the case of an illness or emergency that is properly **documented**. Please refer to the student absence policy posted on the TAMIU website for examples of absences that will ordinarily be excused by the professor and specific documentation that is acceptable. Should you have three final exams scheduled for one day, please consult with me to arrange an alternative time to take your final.

I do not provide lecture notes for students under any circumstances. You will have to rely on the generosity of a classmate or make use of the materials provided on the textbook website or the textbook's study guide. Students with disabilities who require notes or other learning environment accommodations should consult with the Student Disability Services office for assistance.

This syllabus is subject to revision by the professor.

Grade Appeals: If you wish to dispute a grade on a particular assignment for any reason other than an obvious arithmetic error on my part, you will need to type a one-page explanation of your position and turn it in, along with the original graded assignment, *at least one week after* the assignment is returned to you. I will then consider your appeal and make a determination. Appeals must be submitted in hard copy format; no appeals submitted via email will be considered.

For appeals regarding your final grade in the course, please consult the Student Handbook and Catalog for procedures.

University and College Policies: The following policies of the TAMIU College of Arts and Sciences and Texas A&M International University are reproduced here for your information; you may already be familiar with them from other courses, but please review them.

STUDENT EMAIL ADDRESS: All students must obtain a TAMIU email address and have access to the Angel E-Learning system. Students should check their TAMIU email on a regular basis.

STUDENT RESPONSIBILITY FOR DROPPING A COURSE: It is the student's responsibility to drop the course before the designated drop date. Faculty are not responsible for dropping students who stop attending class.

OFFICE HOURS: Your professor will keep regular office hours, as posted above, and appointments can be made to accommodate students' schedules. The door will be open for all students on a "first-come, first-served" basis when no appointment has been previously scheduled.

STUDENTS WITH DISABILITIES: Texas A&M International University seeks to promote reasonable accommodations for all qualified persons with disabilities. This University will adhere to all applicable federal, state. and local level laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal education opportunity. It is the student's responsibility to register with the Student Disability Services office and to contact the faculty member in a timely fashion to arrange for suitable accommodations.

CLASSROOM BEHAVIOR: The College of Arts and Sciences encourages classroom discussion and academic debate as an essential intellectual activity. It is essential that students learn to express and defend their beliefs, but it is also essential that they learn to listen and respond respectfully to others whose beliefs they may not share. The College will always tolerate diverse, unorthodox, and unpopular points of view, but it will not tolerate condescending or insulting remarks. When students verbally abuse or ridicule and intimidate others whose views they do not agree with, they subvert the free exchange of ideas that should characterize a university classroom. If their actions are deemed by the professor to be disruptive, they will be subject to appropriate disciplinary action, which may include being involuntarily withdrawn from the class.

COPYRIGHT RESTRICTIONS: The Copyright Act of 1976, as amended by the Digital Millennium Copyright Act, grants to copyright owners the exclusive right to reproduce their works and distribute copies of their work. Works that receive copyright protection include published works such as a textbook. Copying a textbook without permission from the owner of the copyright may constitute a copyright infringement. Civil and criminal penalties may be assessed for copyright infringement. Civil penalties include damages up to $100,000; criminal penalties include a fine up to $250,000 and imprisonment.

PLAGIARISM AND CHEATING: Plagiarism is the presentation of someone else's work as one's own work. Recently the internet has complicated the issue. Taking from the internet and presenting it as one's own work is still plagiarism. Copying another student's paper or a portion of the paper is called "copying." Neither plagiarism nor copying will be tolerated. Should a faculty member discover that a student committed plagiarism, the student will receive a grade of "F" in that course and the matter will be referred to the Executive Director of Student Life for possible disciplinary action.

INCOMPLETES: Incompletes are discouraged and are assigned only under extenuating circumstances. College policy mandates 70% of course requirements must be met before an "I" can be considered. In fairness to those students who complete the course as scheduled, under no circumstances will an incomplete ("I") be changed to an "A" unless the student has experienced a death in the immediate family or has a written medical excuse from a physician.

Course Outline: Any changes to this schedule will be announced in class and will be posted to the course calendar and in Angel. We will not necessarily read books in the order they appear on the syllabus; please be sure you read the correct chapters *in advance of* the designated class dates.

While the professor may periodically remind students of upcoming scheduled events, it is **your responsibility** to be familiar with this schedule and any changes to it.

Aug 25: Introduction Introduction to the course; political science and sociology as scientific endeavors.

Aug 27: Research in the Social Sciences What is research?; forms of social scientific research.
Reading: Shively, Chapter 1.

Sep 1 Labor Day Holiday: No Class

Sep 3: Theories and Research Topics What is a theory?; characteristics of "good" theories; what is a good research topic?; literature reviews.
Reading: Shively, Chapter 2.

Sep 8, 10: The Problem of Measurement Defining, measuring and operationalizing concepts; levels of measurement.
Reading: Shively, Chapters 4–5.

Sep 15: Explanations and Hypotheses Developing explanations and hypotheses; observational design.
Reading: Shively, Chapter 6.

Sep 17: Case Selection and Statistics Samples and populations; statistics and parameters; sampling frames and sampling techniques.
Reading: Shively, Chapter 7; Schacht and Aspelmeier, Chapter 1.

Sep 22: Mathematical Notation A review of algebraic notation.
Reading: Schacht and Aspelmeier, Chapter 2.

Sep 24: Describing Variables How to describe the distribution of variables; graphing relationships and describing patterns.
Reading: Schacht and Aspelmeier, Chapter 3.
Paper topics due at beginning of class.

Sep 29; Oct 1: Central Tendency The mean, median, and mode; working with grouped data.
Reading: Schacht and Aspelmeier, Chapter 4.

Oct 6, 8: Dispersion The range, absolute deviation, variance, and standard deviation.
Reading: Schacht and Aspelmeier, Chapter 5.

Oct 13 Midterm Exam

Oct 15, 20: The Normal Distribution Percentile ranks and percentiles; standardized (Z) scores.
Reading: Schacht and Aspelmeier, Chapter 6.

Oct 22, 27: Probability Probabilities of independent and dependent events; combinations and permutations.
Reading: Schacht and Aspelmeier, Chapter 7.

Oct 29; Nov 3: Confidence Intervals Confidence intervals in populations and samples; the relationship between sampling error and sample size.
Reading: Schacht and Aspelmeier, Chapter 8.

Nov 4 Election Day — go vote!

Nov 5: Hypothesis Testing Statistical significance; independent-samples tests for differences of means and proportions; matched tests.
Reading: Schacht and Aspelmeier, Chapter 9.

Nov 7 Drop Date

Nov 10, 12: Hypothesis Testing continued.

Nov 17, 19: Nonparametric Tests The Chi-square test.
Reading: Schacht and Aspelmeier, Chapter 13 (pp. 257–68).

Nov 24: Correlation Scattergrams; simple correlation.
Reading: Shively, Chapter 8 (pp. 122–27)

Nov 26 Thanksgiving Holiday: No Class

Dec 1, 3: Linear Regression Linear relationships among variables.
Reading: Schacht and Aspelmeier, Chapter 10.
Paper due December 3 at beginning of class.

Monday, December 8, 11:00 a.m.–2:00 p.m. Final Exam