SOCI 420
Advanced Methods of Social Research
Fall 2017

TEXAS A&M UNIVERSITY

Course information

Course website: www.ernestoamaral.com/soci420-17fall.html

Meeting location: Academic Building 308 (http://aggiemap.tamu.edu/?bldg=0462)

Meeting times: Section 903, Tuesday and Thursday, 9:35–10:50am
Section 904, Tuesday and Thursday, 2:20–3:35pm

Instructor information

Ernesto F. L. Amaral, Assistant Professor, Department of Sociology
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Teaching assistant information

Michael Upchurch, Graduate Student, Department of Sociology
Office location: Academic Building 414A
Office hours: Tuesday, 4–5pm; Thursday, 11am–2pm and by appointment
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Course description

Main contents: This course on advanced methods of social research will cover major topics related to (1) descriptive statistics; (2) inferential statistics; (3) bivariate measures of association; and (4) multivariate techniques. Specific subjects are listed in the calendar of activities provided in this syllabus.

Prerequisite: Sociology majors should have taken and completed Methods of Social Research (SOCI 220) prior to taking SOCI 420. This prior course covers topics related to relationships between sociological theories, research, qualitative evaluation of data, construction and use of analytical procedures and research techniques, and participant observation.

Writing intensive: This course is a writing intensive course with lectures and assignments focusing on appropriate techniques for presenting data and results of statistical analysis, interpreting results, and integrating analysis and interpretation into technically rigorous reports. The course will count toward your university-mandated writing course degree requirement.

Computer intensive: Topics learned in this course will be exemplified with databases, Microsoft Excel, and the statistical software Stata.

Material: Via the course website, I will provide files containing the syllabus, slides, assignments, databases, Stata codes, external links, and other materials, which will be uploaded throughout the semester.

Approach: I encourage students to apply the knowledge they acquire to analyze aggregated data and survey microdata. I emphasize the interpretation of results obtained using statistical techniques, as opposed to asking my students to memorize or manually calculate multiple statistics. My teaching strategy is to break down the significance of statistical methods and make the topic accessible through the use of diagrams, software, household survey databases, handouts, and interactive lab classes.

Upon successfully completing this course, students should be able to:

– Identify advanced concepts related to social research methods.
– Apply quantitative techniques to manipulate sociological databases and analyze the results.
– Investigate social issues using research methods, databases, and statistical software.
– Explain limitations of social research using quantitative methods.
– Analyze microdata from social surveys with statistical software.
– Generate, present, and interpret analyses of sociological data with tables and graphs.
– Elaborate reports based on surveys, utilizing statistical methods, and sociological hypotheses.

Textbook and resource material

There are several options to buy or rent (new, used or digital) copies of the books listed below. As a student at Texas A&M you are not under any obligation to purchase a textbook from a university affiliated bookstore. The same textbook may also be available from independent retailers, including online retailers.

The following textbook is **required** for this course. This material is essentially the same as the 9th edition. Since the cost of these editions recently became quite similar, I will formally adopt the 10th edition. However, if you find a retailer selling the 9th edition with a more affordable price, you can acquire that edition for this course.

>   Healey, Joseph F. 2015. **Statistics: A Tool for Social Research**. Stamford: Cengage Learning. 10th
>   edition. (H)
>   (MSC Bookstore)
>   (Amazon)

The following textbook is **recommended** for this course:

>   Miller, Jane E. 2015. **The Chicago Guide to Writing About Numbers**. Chicago: The University of
>   Chicago Press. 2nd edition. (M)
>   (MSC Bookstore)
>   (Amazon)

This manual for writing about numbers is not required, but I will use it during my lectures to give examples of how to organize, present, and interpret numbers. There are also several online resources to learn about this topic in the Sociology field, such as:

>   Formatting in Sociology (American Sociological Association – ASA Style)
>   (https://owl.english.purdue.edu/owl/resource/583/1/)

>   Writing with Statistics
>   (https://owl.english.purdue.edu/owl/resource/672/1/)

We will use **Excel and the statistical software Stata** for applications with real databases. Stata will be made available in class. We will have several in-class activities in order to learn Stata. I invite you to bring your own laptop to class if you have one available that can run this software. The Department of Sociology has a few loaner laptops that can be used during class time on a first-come first-serve basis.

Assessments: The course grade will be determined based on assignments and exams. Details about each assessment will be provided on the website of this course. See more information about Student Rules regarding examinations via the following link (http://student-rules.tamu.edu/rule08).

Grading scale: The course follows the standard rules of the university regarding the letter grading scale (http://student-rules.tamu.edu/rule10). **Sociology majors must pass with a C to graduate**. Assessments will not be graded on a curve.

Assessment	Percent of final grade
Assignment 1	10%
Assignment 2	10%
Assignment 3	20%
Assignment 4	20%
Assignments sub-total	**60%**
Exam 1	20%
Exam 2	20%
Exams sub-total	**40%**
Total	**100%**

Grading scale	Percent
A	90–100%
B	80–89%
C	70–79%
D	60–69%
F	0–59%

Communication and assignments: I will utilize eCampus (http://ecampus.tamu.edu/) to communicate with students, receive assignments, and provide other resources.

Assignments will explore empirical exercises using real databases with Excel and the statistical software Stata. Students will have to present data of statistical analysis and interpret results in technically rigorous reports. Assignments will be submitted through Turnitin within eCampus. "Turnitin is an online database system designed to help instructors **detect plagiarism**, track citations, facilitate peer reviews, and provide paperless grading markup in written assignments" (http://its.tamu.edu/Systems-Software/TurnItIn). Students will have until 11:59pm of the due dates to turn in assignments through eCampus (http://ecampus.tamu.edu/). Due dates are listed in the calendar of activities of this syllabus.

  Late submission: Students who submit their assignments after the due date will have a 10 percent reduction in their grade. Late submissions will only be accepted before the grades for a specific assignment are posted on eCampus.

  Resubmission: Students will have the opportunity to submit, receive feedback, revise, and resubmit assignments throughout the semester. Students should resubmit their assignments no later than one week after the grades for a specific assignment are posted on eCampus.

Exams will be given in class and will consist of calculations, multiple choice questions, short answer questions, and essay questions. The first exam will be given during regular class hours. The second exam will be given during final examinations week in accordance with the schedule published by the Office of the Registrar (http://registrar.tamu.edu/Courses,-Registration,-Scheduling/Final-Examination-Schedules). The date and time are available in the calendar of activities of this syllabus.

Study groups: You are not competing with others in this class for a grade. Feel free to form study groups to review course materials and work on example problems. However, assignments are not group projects. All assignments should reflect only your own work. Students should not prepare answers to assignments or compare their answers with the work of others before submitting for a grade.

Calendar of activities, course topics, and major assignment dates (tentative)

The tentative calendar of activities below includes dates, course topics, readings, and major assignment dates for this course. Changes will be indicated during classes and will be posted on the course website.

Lecture	Date	Topic	Reading Author.chapter	Assignments due dates & exams dates
		AUGUST		
——	08/29 (Tuesday)	Lecture canceled due to Hurricane Harvey	——	——
01	08/31 (Thursday)	Syllabus & Introduction	Syllabus & H.1	
		SEPTEMBER		
02	09/05 (Tuesday)	Basic descriptive statistics	H.2	
03	09/07 (Thursday)	Basic descriptive statistics	H.2	
04	09/12 (Tuesday)	Sample weights & Statistical software	Slides & Stata01.txt	
05	09/14 (Thursday)	Statistical software	Stata01.txt	**Assignment 1 (documentary)**
06	09/19 (Tuesday)	Statistical software	Stata01.txt	
07	09/21 (Thursday)	Measures of central tendency	H.3	
08	09/26 (Tuesday)	Measures of dispersion	H.4 & Stata02.txt	
09	09/28 (Thursday)	The normal curve	H.5 & Stata03.txt	**Assignment 2 (chapters 2–4)**
		OCTOBER		
10	10/03 (Tuesday)	Introduction to inferential statistics	H.6	
11	10/05 (Thursday)	Estimation procedures	H.7	
12	10/10 (Tuesday)	Statistical software	Stata04.txt & Stata05.txt	
13	10/12 (Thursday)	**Exam 1**	H.1–7	**Exam 1**

Lecture	Date	Topic	Reading Author.chapter	Assignments due dates & exams dates
OCTOBER				
14	10/17 (Tuesday)	Hypothesis testing I: The one-sample case	H.8	
15	10/19 (Thursday)	Hypothesis testing II: The two-sample case	H.9	
16	10/24 (Tuesday)	Statistical software	Stata06.txt	
17	10/26 (Thursday)	Hypothesis testing III: The analysis of variance	H.10	
18	10/31 (Tuesday)	Hypothesis testing IV: Chi square	H.11	
NOVEMBER				
19	11/02 (Thursday)	Statistical software	Stata07.txt	
20	11/07 (Tuesday)	Bivariate association for nominal- and ordinal-level variables	H.12	**Assignment 3 (chapters 5–11)**
21	11/09 (Thursday)	Association between variables measured at the interval-ratio level	H.13	
22	11/14 (Tuesday)	Statistical software	Stata08.txt	
23	11/16 (Thursday)	Elaborating bivariate tables	H.14	
24	11/21 (Tuesday)	Partial correlation, multiple regression, and correlation	H.15	
—	~~11/23 (Thursday)~~	~~Thanksgiving~~	—	—
25	11/28 (Tuesday)	Statistical software	Stata09.txt	
26	11/30 (Thursday)	Statistical software	Stata09.txt	
DECEMBER				
27	12/05 (Tuesday)	Statistical software	Stata09.txt	**Assignment 4 (chapters 12–15)**
28		**Exam 2:** Section 903, 12/08 (Friday), 12:30–2:30pm Section 904, 12/13 (Wednesday), 1–3pm	H.8–15	**Exam 2**

Electronic devices and eating in class

During classes, laptops, tablets, and smartphones should not be used for activities that are not directly related to the course.

Examples of **activities unrelated to class** include: checking and answering email, texting, scheduling appointments, viewing videos, and viewing websites with materials unrelated to the course.

Examples of **activities related to class** include: reviewing documents and course materials posted on the web, and examining websites that are visited as part of the lecture. If the policy is not respected, I will ban all devices for non-laptop required sessions.

Eating is not permitted during classes.

Americans with Disabilities Act (ADA) policy statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit http://disability.tamu.edu.

Academic integrity statement and policy

"An Aggie does not lie, cheat, or steal, or tolerate those who do" (http://aggiehonor.tamu.edu).

Definitions of academic misconduct are available in this link (http://aggiehonor.tamu.edu/Rules-and-Procedures/Rules/Honor-System-Rules#Definitions). "According to the Aggie Honor System Office, Plagiarism is 'The appropriation of another person's ideas, processes, results, or words without giving appropriate credit.' Plagiarism is just one form of academic misconduct; plagiarism and cheating are perhaps the most commonly practiced" (http://library.tamu.edu/services/library_tutorials/academic_integrity/index.html).

Attendance policy

This course is organized on the assumption that students will attend and participate in every class. The University views class attendance as the responsibility of an individual student. Attendance is essential to complete the course successfully. **I will take attendance each class.** Attendance will not be considered for grading, but only for following student participation throughout the semester. University rules related to excused and unexcused absences are located online at http://student-rules.tamu.edu/rule07.

Dates on which major exams and assignments will be due are provided in the calendar of this syllabus. Topics and dates of lectures, assignments, and exams are subject to change. Eventual changes will be clarified during classes and will be posted on the course website.

Students who miss class are responsible for searching for information on: changes to the class schedule announced during the lecture periods, changes in assignment requirements or exam coverage announced during the lecture periods, any materials distributed during the lecture periods, and all materials presented in the lectures. The course website, fellow students in the class, and the teaching assistant are resources to help you stay current on the schedule and any course changes.

Make-up policy

If an absence is excused, the instructor will either provide the student an opportunity to make up any quiz, exam or other work that contributes to the final grade or provide a satisfactory alternative by a date agreed upon by the student and instructor. If the instructor has a regularly scheduled make up exam, students are expected to attend, unless they have a university-approved excuse. The make-up work must be completed in a timeframe not to exceed 30 calendar days from the last day of the initial absence.

The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for the absence. The specifics of what constitutes an excused absence are available at http://student-rules.tamu.edu/rule07. The fact that these are university-excused absences does not relieve the student from responsibility for prior notification and documentation. Failure to notify and/or document properly may result in an unexcused absence. Falsification of documentation is a violation of the Honor Code.

Other absences not listed in the link above may be excused at the discretion of the instructor with prior notification and proper documentation. In cases where prior notification is not feasible (e.g., accident or emergency) the student must provide notification by the end of the second working day after the absence, including an explanation of why notice could not be sent prior to the class. Accommodations sought for absences due to the observance of a religious holiday can be sought either prior to or after the absence, but not later than two working days after the absence.