

Sociology 312 – Introduction to Statistics in Sociology Fall 2020

Lectures: Tuesdays and Thursdays

Recitation: Thursdays 5:15-6:10PM

Course Webpage is available at <https://sakai.rutgers.edu/portal>

PROFESSOR: Quan D. Mai
Office Hours: Thursdays 10:30AM-11:30 AM via [Webex room](#)
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Course Overview

This course provides a basic introduction to the application and interpretation of statistical analyses in the social sciences. By the end of the course, you will be familiar with a variety of basic statistical techniques that allow you to examine interesting social questions. We will begin by learning how to describe the characteristics of groups. We will then proceed to discuss how we can examine and generalize about relationships between characteristics. Emphasis will be placed on understanding and interpreting the meaning of statistics that are used to describe and generalize about the characteristics of groups. Last, we will learn how to use one of the computer programs (SPSS) that is widely used to perform statistical analysis.

Learning Goals:

At the completion of this course, students will be able to:

1. Understand the role of statistics in doing the research.
2. Read and understand the statistical concepts from reports and papers.
3. Master the statistical methods to summarize and analyze data: descriptive statistics, confidence interval for population mean and proportion, hypothesis testing, Chi-square test for independence, and basic linear regression model.
4. Interpret results from SPSS and be able to perform appropriate statistical techniques.

Courses in the Time of COVID:

I understand that this course is being offered in a time of tremendous uncertainty, and I recognize that you (and I) may encounter unexpected challenges during this semester. That includes challenges related to health and illness, technology, caregiving responsibilities, work responsibilities, and more.

My goal this semester is to support you in doing the best work you can in light of the challenges you face. I understand that college students face tremendous pressure to work hard, get “good”

grades, and be as “successful” as possible. That said, I encourage you to remember that your health and well-being are far more important than the work you do in this class or any class. And I encourage you to take the time you need to care for yourself and for your loved ones.

If you are finding it difficult to balance your health and well-being with your work in this class, please let me know. It is okay to ask for help and to acknowledge when you are struggling, and I am happy to help connect you with resources and services on campus and also make accommodations to our course plan as needed.

I am accessible by email, and I will do my best to respond to messages within one business day. I will also have virtual office hour appointments available for you to meet with me to discuss any questions or concerns or thoughts you have about the course or the material or sociology more generally.

I also ask that you be patient with me if the challenges of this semester force me to make last-minute changes to the course plan. I will do my best to communicate any changes clearly and make them with respect for the inconvenience, frustration, and confusion that change may cause.

Course Lectures:

The lectures will be offered **asynchronously**. All work for the course can be completed at a time and place of your choosing. All course materials and assignments will be posted on and accessible through Sakai.

Course Recitations:

The class will meet weekly, and I strongly encourage you to participate in recitation **LIVE (synchronously)** so that you can ask questions as the TA (Allegra Pocinki) goes over the material. It is really important for you to ask questions as we go through this course, as each thing we learn this semester builds on the last week’s material. If you are unable to meet at our scheduled time, recitation will be recorded and uploaded to [Box](#). All the slides and recorded recitations will be uploaded to the Resources folder on Sakai.

Office Hours and Communications:

Office hours are great for getting detailed answers and clarification. Please feel free to schedule an appointment for office hours to talk about the course materials, lectures, or assignments. I encourage everyone to come to office hours at least once this semester. We will meet virtually in my Webex room. **If you have not activated Webex for your Rutgers account, the instructions to do so are [here](#).** This will give me an opportunity to get to know you more and for you to get your questions answered. Attending office hours is shown to help your grade. ***If you contact me by email, please note that emails received Friday afternoon/evening will likely not receive a response until the following Monday.***

Required Text

Levin, Jack A. James Alan Fox, and David R. Forde. *Elementary Statistics in Social Research*, 12th Edition. Pearson

Electronic version: Revel Elementary Statistics in Social Research, Updated Edition 12e

Statistical Package

In this course, we will be using a computer program called SPSS to do some basic statistical analysis. The TA will walk you through how to use this program – no previous experience is necessary. To access the program, you will need to use Rutgers' [Virtual Computer Lab](#). You will log in [here](#) using your NETID and password like you would for any other Rutgers service (like Sakai or Canvas). Detailed instructions will be made available in recitation videos.

Requirements

1. Attendance in lecture and recitations is essential for successfully learning the material in this course. You simply cannot learn statistics if you fast forward the lectures and recitations. It is difficult enough to learn in person, and it might be even harder to learn remotely without your extra efforts. Sakai allows instructors to see information on users who accessed recorded files, and I might use this tool to track your attendance.

Indeed, some topics covered in lecture are not covered in the textbook. After most lectures, I will post short exercises to Sakai. These exercises will be completed throughout the semester to reinforce the material from lecture. These exercises and attendance (in both lectures and recitations) together are **worth 10% of your course grade**.

2. Six assignments are due throughout the semester. These include a combination of problem solving (hand and computer calculations) and conceptual interpretation of the results. All assignments are available on the course sakai site. Together these assignments are **worth 36% of your course grade (each is worth 6% of your grade)**.

Please follow these instructions when submitting an assignment to Sakai:

1. Upload ONE Microsoft Word document with your typed answers, as well as uploaded photos of your hand-written work if required. **I will NOT accept PDF files, as I cannot provide written feedback on them.**
2. Make sure your document includes:
 - a. Your name on top
 - b. Answers to the questions typed BELOW each question.
 - c. Photo(s) of your hand calculations
3. Use the following convention for naming your Word document:
LastnameFirstname_assignment#

Once you've uploaded your Word document, the TA will grade it using track changes and then upload a graded version to Sakai. You will be notified when your graded assignment has been uploaded. You can access it exactly where you submitted it in the Assignments tab.

Grades are integral to your education and career, and therefore have the potential to be a source of contention. If you'd like to talk about an assignment and why the grade assigned was given, feel free to schedule an appointment for office hours. We will provide the grading

rubric for each assignment when it is distributed so you know how the points are assigned. **If you are unable to turn in an assignment on time, PLEASE LET ME KNOW by emailing me.** Due to the current circumstances of virtual learning, I am more than happy to make adjustments regarding assignment due dates. However, if I feel as though you are taking advantage of this, I will assign a 10% penalty for late assignments. *The Professor of the course makes the final decision regarding grades for this course.*

3. One in-class midterm examination will be given during the semester as scheduled on the course outline below. This exam is **worth 27% of your course grade.**
4. A non-cumulative final examination will be given during the regularly scheduled final examination time. The time of this exam is noted below in the course outline. The final examination is **worth 27% of your course grade.**
5. You will **need to have a calculator** to do the assignments, take in-class exams, and learn the material taught in this course. I found numerous solar powered calculators for purchase online that cost less than \$5. **You cannot use the calculator on your phone for exams.**
6. You need to have a **flash drive** (or cloud storage such as Dropbox) in order to save and complete assigned work. **Google drive is NOT suitable.**

Note

No make-up exams or late assignments are permitted unless you contact me **PRIOR TO THE EXAM OR THE DUE DATE.** *It is extremely important that you let Professor Mai know if you have any serious difficulties that get in the way of completing your work on time.* **Assignments submitted 4 days after the due date will not be accepted. For every business day the assignment is late after the assignment is due, 10% will be deducted from the assignment score.**

Academic Misconduct

You should familiarize yourself with the Rutgers University policies and procedures on academic honesty, available at https://slwordpress.rutgers.edu/academicintegrity/wp-content/uploads/sites/41/2014/11/AI_Policy_2013.pdf. All violations of academic integrity, such as cheating on exams or plagiarizing others' work for written assignments, will be referred to the appropriate authorities and sanctioned accordingly.

Students with Disabilities

In accordance with University policy, if you have a documented disability and require accommodations to obtain equal access in this course, please contact me at the beginning of the semester. Students with disabilities must be registered with the Office of Student Disability Services and must provide verification of their eligibility for such accommodations.

Copyright

Lectures and materials utilized in this course, including but not limited to videocasts, podcasts, visual presentations, assessments, and assignments, are protected by United States copyright laws as well as Rutgers University policy. As the instructor of this course, I possess sole copyright ownership. You are permitted to take notes for personal use or to provide to a

classmate also currently enrolled in this course. Under no other circumstances is distribution of recorded or written materials associated with this course permitted to any internet site or similar information-sharing platform without my express written consent. Doing so is a violation of the university's [Academic Integrity Policy](#). Similarly, these copyright protections extend to original papers you produce for this course. In the event that I seek to share your work further, I will first obtain your written consent to do so.

Course Grades:

A = 90 – 100 %

B+ = 85 - 89 %

B = 80 - 84 %

C+ = 75 - 79 %

C = 70 - 74 %

D = 60 - 69 %

F < 60% ☹️☹️☹️

If you have any questions on the gradebook, please calculate your grade by hand, before emailing me.

COURSE OUTLINE

The dates indicated are tentative and may change based upon how this class proceeds. Some topics may take a bit more time and some may take less time than indicated below. Any changes in dates, including assignment due dates, will be announced in class. You are responsible for finding out about any announcements made in class.

<u>Date</u>	<u>Topic and Reading</u>
Tuesday, September 1	Course Overview (No recitation)
Thursday, September 3	Introduction Reading: Chapter 1, Introduction – Summary (Recitation begins)
Tuesday, September 8	Frequency Distributions Reading: Chapter 2, Introduction – 2.11, and 2.13 - Summary
Thursday, September 10	Measures of Central Tendency and Dispersion Reading: Chapters 3 and 4, Introduction – Summary in both chapters
Tuesday, September 15	Measures of Central Tendency and Dispersion (<i>continued</i>)
Thursday, September 17	Measures of Central Tendency and Dispersion (<i>continued</i>) <i>Assignment 1 due</i>
Tuesday, September 22	Probability and the Normal Distribution Reading: Chapter 5, Introduction – Summary
Thursday, September 24	Probability and the Normal Distribution (<i>continued</i>)
Tuesday, September 29	Confidence Intervals Reading: Chapter 6, Introduction – 6.7, and Summary <i>Assignment 2 due</i>
Thursday, October 1	Confidence Intervals (<i>continued</i>)
Tuesday, October 6	Confidence Intervals (<i>continued</i>)
Thursday, October 8	Review
Tuesday, October 13	Midterm Examination
Thursday, October 15	Hypothesis Testing

	No reading
Tuesday, October 20	T-tests and Difference of Means Reading: Chapter 7, Introduction – 7.9, 7.12, 7.14, and Summary
Thursday, October 22	T-tests and Difference of Means (<i>continued</i>)
Tuesday, October 27	T-tests and Difference of Means (<i>continued</i>)
Thursday, October 29	T-tests and Difference of Means (<i>continued</i>)
Tuesday, November 3	Analysis of Variance Reading: Chapter 8, Introduction – 8.4, and 8.7 – Summary <i>Assignment 3 due</i>
Thursday, November 5	Analysis of Variance (<i>continued</i>)
Tuesday, November 10	Crosstabulation and Chi-square Reading: Chapter 2, 2.12, and Chapter 9, Introduction and 9.2 <i>Assignment 4 due</i>
Thursday, November 12	Crosstabulation and Chi-square (<i>continued</i>)
Tuesday, November 17	Crosstabulation and Chi-square (<i>continued</i>)
Thursday, November 19	Correlation and Regression Reading: Chapter 10, Introduction – 10.5, and Chapter 11, Introduction – 11.4 <i>Assignment 5 due</i>
Tuesday, November 24	NO CLASS and NO RECITATION
Thursday, November 26	NO CLASS and NO RECITATION – Thanksgiving Recess
Tuesday, December 1	Correlation and Regression (<i>continued</i>)
Thursday, December 3	Correlation and Regression (<i>continued</i>)
Tuesday, December 8	Review <i>Assignment 6 due</i>
Monday, December	Final Examination, TBD due to COVID. Will update as the semester progresses.