

SYLLABUS

SOC/3549

Statistics in Sociology
Autumn 2020 (full term)
3 credit hours
Online

COURSE OVERVIEW

Instructor

Instructor: To be determined

Email address: (preferred contact method)

Phone number:

Office hours:

Prerequisites

None.

Course description

The aim of this course is familiarize the student with some basic techniques of statistical description and inference. The main focus, of course, will be on sociological data. The first part of the course is oriented towards describing data and conveying summaries of variables. The second part of the course is oriented towards probabilities and the distributions that are often assumed to underlie empirical data. The last part of the course is oriented towards inferential statistical tests including regression analyses, etc. By the end of the course, you will be familiar with a variety of basic statistical techniques that allow you to examine research questions. Additionally, the skills you learn will allow you to be more critical consumers of statistical information.

Course learning outcomes

By the end of this course, students should successfully be able to:

- ▶ Describe data using summary statistics and basic visualizations
- ▶ Understand how to use a sample to make inferences about a population
- ▶ Make inferences about a population given sample data
- ▶ Critically consume quantitative/statistical information

HOW THIS ONLINE COURSE WORKS

Mode of delivery: This course is 100% online. There are no required sessions when you must be logged in to Carmen at a scheduled time.

Pace of online activities: This course is divided into **weekly modules** that are released one week ahead of time. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame.

Credit hours and work expectations: This is a **3-credit-hour course**. According to Ohio State policy (go.osu.edu/credithours), students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of (C) average.

Attendance and participation requirements: Because this is an online course, your attendance is based on your online activity and participation. The following is a summary of students' expected participation:

- **Participating in online activities for attendance: AT LEAST ONCE PER WEEK**
You are expected to log in to the course in Carmen every week. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.
- **Office hours and live sessions: OPTIONAL**
All live, scheduled events for the course, including my office hours, are optional.

COURSE MATERIALS AND TECHNOLOGIES

Textbooks

Required

- There is no required textbook for this course.

Recommended/optional

- I do recommend the following book:
- Frankfort-Nachmias, Chava, Anna Leon-Guerrero, and Georgiann Davis. 2020. "Social Statistics for a Diverse Society." *9th edition*. Thousand Oaks, CA: Sage.
- In particular, if you anticipate missing any class periods then I highly recommend getting the book. I will not teach directly from the text, and the material covered in this course is pretty standard. The topics listed in the course outline can be found in most undergraduate statistics books, particularly those written for a social scientific audience. Having the most recent edition of this book is not of fundamental importance, but try to get a recent version so that the table of contents is as similar as possible

Other fees or requirements

The software for the course is R, which we will implement via RStudio. There are three options for accessing the software application (below). We will discuss relevant software details in class, but a good introduction is available here: <https://education.rstudio.com/>

- Both R and RStudio are free and open source. So you can download and install them on your personal computer for free.
 - You can download R here: <https://www.r-project.org/>
 - You can download RStudio here: <https://rstudio.com/>
- R and RStudio are installed on many campus computers in computer labs. All computers in the Research Commons in the Main Library, for example, are equipped with R and RStudio.
- OSU has partnered with the Ohio Supercomputing Center (OSC) to offer remote access to RStudio. You need to create an online account, but then can access the software (and data and code) via a web browser (e.g., Chrome, Firefox, or even Explorer if using your grandparents' computer). For this course, we're using "on demand" computing, meaning that you log into the OSC system, select our course, and then you will be granted access to a node on one of the supercomputers. Everything is done via a web browser with no need to have the R software installed locally (you'll be running R, but through a cloud implementation). I have uploaded a document to Carmen called "R Studio On Demand" with instructions for this option.

Course technology

Technology support

For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the Ohio State IT Service Desk. Standard support hours are available at ocio.osu.edu/help/hours, and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** ocio.osu.edu/help
- **Phone:** 614-688-4357(HELP)
- **Email:** servicedesk@osu.edu
- **TDD:** 614-688-8743

Technology skills needed for this course

- Basic computer and web-browsing skills
- Navigating Carmen (go.osu.edu/canvasstudent)
- CarmenZoom virtual meetings (go.osu.edu/zoom-meetings)
- Recording a slide presentation with audio narration (go.osu.edu/video-assignment-guide)
- Recording, editing, and uploading video (go.osu.edu/video-assignment-guide)

Required equipment

- Computer: current Mac (MacOs) or PC (Windows 10) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed and tested
- Microphone: built-in laptop or tablet mic or external microphone
- Other: a mobile device (smartphone or tablet) to use for BuckeyePass authentication

Required software

- Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. Full instructions for downloading and installation can be found at go.osu.edu/office365help.

Carmen access

You will need to use BuckeyePass (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the BuckeyePass - Adding a Device help article for step-by-step instructions (go.osu.edu/add-device).
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new**

codes button that appears. This will text you ten passcodes good for 365 days that can each be used once.

- Download the Duo Mobile application (go.osu.edu/install-duo) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357(HELP) and IT support staff will work out a solution with you.

GRADING AND FACULTY RESPONSE

How your grade is calculated

ASSIGNMENT CATEGORY	POINTS
Carmen engagement (syllabus quiz, weekly log ins, ad hoc assignments)	20 pts
Homework assignments	120 pts
Exams	360 pts
Total	500

See course schedule below for due dates.

Descriptions of major course assignments

Carmen Engagement

Description: Research shows that consistent engagement with material promotes learning. To incentivize engagement in this course, we will monitor use of Carmen throughout the term. Out of 15 weeks, full credit is engagement with Carmen in 12 or more weeks. There will also be some (at least one) ad hoc assignments done through Carmen. For example, students will be expected to post a video introduction to allow the Instructor and other students to get to know one another. Finally, students are expected to take a quiz during the first week of classes on the course syllabus. The quiz will be available until Friday at 5:00pm. This ensures that students have read and understand the course syllabus and expectations for success in this course.

Academic integrity and collaboration: Discussion posts should be your own original work.

Homework Assignments

Description: Homework assignments will entail compiling text (interpretations), code, output, figures and tables into a single PDF document. You can use Word or Docs to do this if you would like. To do so, you'll copy and paste things from RStudio into your Word processing program, and can compile a PDF from there. Alternatively, you can use R Mark Down, which compiles text, statistics, tables, figures, etc. into a single PDF. That is, within RStudio you can create PDF documents for the homework assignments. This format makes replication easy, and data and text are integrated seamlessly. Homework will be assigned approximately every other week.

Academic integrity and collaboration: Students may collaborate on homework assignments, but each student's unique contribution must be identifiable. In other words, each student must do their own calculations, code, and writeup of the homework, but you are free to discuss it. Any evidence to the contrary will result in a grade of F. If you have any doubts on this matter, please email me before uploading your assignment.

Exams

Description: There will be three exams in this class. The exams are not cumulative, per se, but the course content builds on itself in a way that you need to understand early material in order to grasp later material. Exams will be completed in Carmen. Students will have 2 hours to complete the exams from the time that they start it. Exams will be available at 9:00am on Tuesdays and must be started by 5:00pm on Friday. You are allowed to use class notes, lectures and the text to help you answer the questions. You will be given data and asked to compute and interpret statistical results. Exams will also include conceptual questions that only require a text response.

Academic integrity and collaboration: Collaboration on Exams is prohibited. Any evidence of collaboration on an exam will result in a grade of F. If you have any doubts on this matter, please email me before uploading your assignment.

Late assignments

Please refer to Carmen for due dates. Due dates are set to help you stay on pace and to allow timely feedback that will help you complete subsequent assignments. Homework assignments that are turned in late are docked 10% for each 24 hours that the assignment is late. So the maximum score on a Homework assignment that is turned in anywhere from 1 second to 24 hours late is 90%; the maximum score for a Homework assignment that is 24 hours and 1 second late to 48 hours late is 80%, and so on. Exams may not be turned in late except in extreme circumstances (i.e., an excused absence in the window in which the exam is to be taken).

Grading scale

93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70–72.9: C-
67–69.9: D+
60–66.9: D
Below 60: E

Instructor feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call **614-688-4357(HELP)** at any time if you have a technical problem.)

- **Grading and feedback:** For large weekly assignments, you can generally expect feedback within **7 days**.
- **Email:** I will reply to emails within **24 hours on days when class is in session at the university**.
- **Discussion board:** I will check and reply to messages in the discussion boards every **24 hours on school days**.

OTHER COURSE POLICIES

Discussion and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.
- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online.
- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.

- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

Academic integrity policy

See **Descriptions of major course assignments**, above, for my specific guidelines about collaboration and academic integrity in the context of this online class.

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university’s *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- Committee on Academic Misconduct web page (go.osu.edu/coam)
- Ten Suggestions for Preserving Academic Integrity (go.osu.edu/ten-suggestions)

Student Services and Advising

University Student Services can be accessed through BuckeyeLink. More information is available here: <https://contactbuckeyelink.osu.edu/>

Advising resources for students are available here:

<http://advising.osu.edu>

Copyright for instructional materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Statement on Title IX

All students and employees at Ohio State have the right to work and learn in an environment free from harassment and discrimination based on sex or gender, and the university can arrange interim measures, provide support resources, and explain investigation options, including referral to confidential resources. If you or someone you know has been harassed or discriminated against based on your sex or gender, including sexual harassment, sexual assault, relationship violence, stalking, or sexual exploitation, you may find information about your rights and options at titleix.osu.edu or by contacting the Ohio State Title IX Coordinator at titleix@osu.edu. Title IX is part of the Office of Institutional Equity (OIE) at Ohio State, which responds to all bias-motivated incidents of harassment and discrimination, such as race, religion, national origin and disability. For more information on OIE, visit equity.osu.edu or email equity@osu.edu.

Commitment to a diverse and inclusive learning environment

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Land Acknowledgement

We would like to acknowledge the land that The Ohio State University occupies is the ancestral and contemporary territory of the Shawnee, Potawatomi, Delaware, Miami, Peoria, Seneca, Wyandotte, Ojibwe and Cherokee peoples. Specifically, the university resides on land ceded in the 1795 Treaty of Greenville and the forced removal of tribes through the Indian Removal Act of 1830. I/We want to honor the resiliency of these tribal nations and recognize the historical contexts that has and continues to affect the Indigenous peoples of this land.

More information on OSU's land acknowledgement can be found here:

<https://mcc.osu.edu/about-us/land-acknowledgement>

Your mental health

As a student you may experience a range of issues that can cause barriers to learn, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. No matter where you are engaged in distance learning, The Ohio State University's Student Life Counseling and Consultation Service (CCS) is here to support you. If you find yourself feeling isolated, anxious or overwhelmed, on-demand resources are available at go.osu.edu/ccsondemand. You can reach an on-call counselor when CCS is closed at 614- 292-5766, and 24-hour emergency help is also available through the 24/7 National Prevention Hotline at 1-800-273-TALK or at suicidepreventionlifeline.org. The Ohio State Wellness app is also a great resource available at go.osu.edu/wellnessapp.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

The university strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability including mental health, chronic or temporary medical conditions, please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. **SLDS contact information:** slds@osu.edu; 614-292-3307; 098 Baker Hall, 113 W. 12th Avenue.

Accessibility of course technology

This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- Canvas accessibility (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- CarmenZoom accessibility (go.osu.edu/zoom-accessibility)
- Collaborative course tools

COURSE SCHEDULE

Refer to the Carmen course for up-to-date assignment due dates.

Week	Dates	Topics, Readings, Assignments, Deadlines
1	8/24-8/29	Introduction to each other, the course, and the software
2	8/30-9/5	Nature of statistics [Chapter 1 & Carmen reading on levels of measurement] Homework on Levels of Measurement and R due 9/3
3	9/6-9/12	1st Moment of the Distribution (Central Tendency) & Graphing Single Variables [Chapters 2 & 3]
4	9/13-9/19	2nd Moment of the Distribution (Variability) [Chapter 4] Homework on Central Tendency and Variability due 9/17
5	9/20-9/26	Probability and the Binomial Distribution [Carmen reading on the binomial distribution] Short Homework on Binomial due 9/24
6	9/27-10/3	Probability and the Normal Distribution [Chapter 5]
7	10/4-10/10	Exam 1 – Covers Sessions 2, 3, 4, and 5
8	10/11-10/17	Samples and Populations: Foundations of Nonparametric Statistics [No reading] & Samples and Sampling Distributions [Chapter 6]
9	10/18-10/24	Samples and Populations: Foundations of Parametric Statistics [Chapters 7 & 8] Homework on Normal Distribution and Sampling due 10/22
10	10/25-10/31	Considering two variables and graphing two variables [Chapter 9]
11	11/1-11/7	Exam 2 – Covers Sessions 5, 6, 8, and 9
12	11/8-11/14	Association Between Two Variables [Chapter 10] Homework on two variables due 11/12
13	11/15-11/21	Analysis of Variance (ANOVA) [Chapter 11]
14	11/22-11/28	Correlation and Regression [Chapter 12] Homework on ANOVA and Regression due 11/29 (note: extension due to thanksgiving break)

Week	Dates	Topics, Readings, Assignments, Deadlines
15	11/29-12/5	Overview for final exam (Covers sessions 10, 12, 13, and 14)

***FINAL EXAM DISTRIBUTED DEC. 8TH/DUE IN
"ASSIGNMENTS" IN CARMEN BY DECEMBER 11TH BY 5
P.M.***