



SYLLABUS

STAT 5510

Statistical Foundations of Survey Research

Spring 2023 (full term)

3 credit hours

In-Person

COURSE OVERVIEW

Instructor

Instructor: Elly Kaizar

Email address: kaizar.1@osu.edu (preferred contact method)

Phone number: (614) 247-2585

Office hours: Cockins Hall 221, day/time to be determined, or by appointment

Prerequisites

STAT 1350 (135), STAT 1450 (145), or STAT 5301 (528), and MATH 1075 (104), or equiv; or permission of instructor. Not open to students with credit for STAT 6510 (651) or STAT 551

Course description

Understand and practice methods of survey research and data analysis including questionnaire design and pilot testing, non-sampling and sampling errors, sampling design, descriptive statistics, estimation, and hypothesis testing; and ethics

HOW THIS COURSE WORKS

Mode of delivery: Lectures are held in person at the times and location listed below. Lecture recordings and simulcasts are typically not available. Should in-person classes be canceled, I will notify you as to which alternative methods of teaching will be offered to ensure continuity of instruction for this class. Communication will be via Announcements in Carmen.

- Tuesdays and Thursdays, 12:45-2:05pm, McPherson Laboratory room 1035 (MP1035)

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 (attendance at lecture or occasional substitution such as instructor videos and supplemental activities) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of (C) average.

Seeking assistance: Students with questions about course content (e.g., confusion about a definition) or mechanics (e.g., homework due date) should post these questions to the course discussion boards in Carmen. If a student asks such a question via email, I reserve the right to post that question directly to the discussion board and answer it there. Questions related to individual student situations (such as grades or accommodation requests) should be sent to the instructor via email or asked in person. Students should use their discretion when seeking assistance about homework assignments. Consider whether your question can be posed as a question about ideas discussed or presented in the course. If so, post it to the discussion boards. If not, then email the instructor. Unless a student posts assignment solutions directly to the discussion boards or the instructor has given prior guidance contrary to the post, discussion board posts would typically not be considered to be academic misconduct.

Attendance and participation requirements: Because this is an in-person course, your attendance is primarily based on your in-person activity and participation. However, you are also expected to actively participate outside of the classroom. The following is a summary of students' expected participation:

- **Participating in in-person activities for attendance: TWICE PER WEEK**
You are expected to attend in-person lectures. I do not plan to provide lecture recordings of in-person activities. If you have a situation that might cause you to miss a substantial number of class periods, discuss it with me *as soon as possible*.
- **Office hours: OPTIONAL**
Students are welcome to attend office hours, but these are optional. I encourage you to visit during posted office hours; if this is not possible you may request individual office hours by appointment.
- **Viewing and interacting with Carmen: SEVERAL TIMES PER WEEK**
You are responsible for keeping up to date with course announcements and posts made to the Carmen website, as well as posting to the Carmen discussion boards or completing other activities on Carmen as requested/assigned. Note that you can control your [Carmen notification preferences](#) to facilitate your keeping up with the course.

COURSE MATERIALS AND TECHNOLOGIES

Textbooks

Required

- Groves, Robert M., Floyd J. Fowler Jr., Mick P. Couper, James M. Lepkowski, Eleanor Singer, Roger Tourangeau (2011) *Survey Methodology* (2nd ed.). Wiley.

- Supplemental readings may be assigned. These would be available electronically at no cost via The Ohio State University Library or publicly available resources.

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
- Mobile device: a mobile device (smartphone or tablet) to use for BuckeyePass authentication and TopHat participation

Required software

- **R:** This class requires you to use the statistical software package called R (The R Project for Statistical Computing; <http://www.r-project.org/>). This software package is available as Free Software.

- You can download R for Windows, Mac, and Linux, from the CRAN archive at <https://cran.r-project.org>.
- An in-depth introduction to R is available at <http://cran.r-project.org/doc/manuals/Rintro.pdf>
- Hands-on tutorials are available in the Swirl system, which you can learn about at <http://swirlstats.com/>. In particular, “R Programming: The basics of programming in R” is an appropriate first tutorial for students who have never used R.
- **RSudio:** I strongly recommend an easier to use interface to R, which is available in the software package RStudio, published by the company Posit. This package is available for Windows, Mac, and Linux and can be downloaded for free from <https://posit.co/downloads/>. I will be using RStudio when demonstrating in class.
 - Note that RStudio requires R to be installed, so you should install R before attempting to install RStudio.
- **Qualtrics:** This class requires you to use the survey design, distribution, data collection and analysis web application called Qualtrics. All Ohio State students can access Qualtrics and Qualtrics-provided basecamp trainings via the SSO login via this website: <http://osu.qualtrics.com/>.
- **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.
- **Top Hat:** We will occasionally use the Top Hat software to elicit student responses during lectures. Students will use their smart phones or other mobile device to text responses to questions posed. You may download the Top Hat app or use the direct link below. Instructions for Ohio State students getting started with Top Hat can be found at <https://teaching.resources.osu.edu/toolsets/top-hat/guides/getting-started-top-hat-students>.
 - Top Hat course name: SP23 STAT 5510 - Stat Survey Res (34371)
 - Direct Link: <https://app.tophat.com/e/238868>
 - 6-digit join code: 238868

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
Homework	15
Participation	5
Midterm 1	20
Midterm 2	20
Final Exam	25
Project	15
Total	100

See course schedule below for approximate dates; See Carmen for most up-to-date information

Descriptions of major course assignments

Homework

Description: The goal of homework assignments is to help you learn. Homework assignments will be assigned regularly during the semester, approximately every 1-2 weeks for a total of approximately 10 assignments. Assignments may vary in length and overall effort to account for other course assignments (exam/project) students may be working on or preparing for. All assignments should be submitted via Carmen – typically as an uploaded .pdf document or a completed Carmen quiz. Assignments are typically due to be received by Carmen at 11:59pm on Fridays, and are typically assigned a week prior to the due date. Each student’s lowest homework grade will be dropped. Homework grades will be deducted 5% for each hour it is submitted late, so be sure to leave enough time for the vagaries of Carmen processing and internet speed. Please talk to me as soon as possible if you experience some

unusual circumstance that would affect your ability to work on homework during the week and thus submit it on time.

Academic integrity and collaboration: You are encouraged to work with other STAT 5510 students on homework and you may freely consult references *other than* previously published homework solutions to STAT 5510 or STAT 6510. Each student must hand in solutions produced themselves that represents their own work. Do not copy any part of another student's homework solutions. You must list at the top of your homework your collaborators and any references that you consulted.

Participation

Description: The goal of participation is to facilitate the creation of a rich learning environment. Some formal measure of participation will typically be available during each lecture period, typically via Top Hat. For each student, the grades for the two days with lowest participation grades will be dropped.

Academic integrity and collaboration: Students should record their true participation. Entering a participation code or otherwise indicating participation when the student is not present to participate is considered academic misconduct. For example, answering a Top Hat question posed synchronously in class when not present in that class would typically be considered academic misconduct.

Exams

Description: The goal of exams is for you to review and consolidate ideas and for me to assess your individual learning and understanding. Midterm exams will take place during class time. The final exam will take place during the time designated by the registrar. Tentative dates are listed in the course schedule below. Refer to Carmen for the most up-to-date information. Students may use calculators but not any communication device.

Academic integrity and collaboration: Students may not communicate with anyone other than the course instructor during exams, and may only use resources (e.g., a calculator) specifically designated on the exam assignment.

Project

Description: The goal of the project is for you to review and consolidate ideas and skills useful for practically implementing and/or analyzing data from a survey and for me to assess your learning and skills. A single group project will be assigned shortly after spring break, and is planned to be due on April 25. See Carmen for details shortly after spring break.

Academic integrity and collaboration: Groups may consult with the course instructor and teaching assistant, but should otherwise not communicate with other students in the class or other outside advisors. Work submitted by the group should only include work by the group members, and any written resources must be properly cited. More details will be included with the assignment.

Late assignments

Late homework and project submissions have their grade deducted 5% for every hour late. Exam make-ups are typically not allowed, but if circumstances may warrant an exam accommodation, such requests should be discussed with the instructor as soon as possible.

Grading scale

93-100: A
 90-92.9: A-
 87-89.9: B+
 87-89.9: B
 83-86.9: B-
 80-82.9: C+
 77-79.9: C
 73-76.9: C-
 70-72.9: 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 weekly assignments, you can generally expect feedback within **7 days**. For exams, you can generally expect feedback within **10 days**.
- **Email:** I will reply to emails within **48 hours on days when class is in session at the university**.
- **Discussion board:** I or the course teaching associate will check and reply to messages in the discussion boards every **48 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/>.

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

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator at titleix@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 learning, 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. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling [614-292-5766](tel:614-292-5766). CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at [614-292-5766](tel:614-292-5766) and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

Religious Accommodations

Our inclusive environment allows for religious expression. Students requesting accommodations based on faith, religious or a spiritual belief system in regard to examinations, other academic requirements or absences, are required to provide the instructor with written notice of specific dates for which the student requests alternative accommodations at the earliest possible date. For more information about religious accommodations at Ohio State, visit <https://odi.osu.edu/religious-accommodations>.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

The University strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. 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; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

COURSE SCHEDULE (TENTATIVE)

Refer to the Carmen course for up-to-date assignments and due dates.
Unless otherwise indicated, readings are from the course textbook.

Week	Dates	Topics, Readings, Assignments, Deadlines	Reading
1	Jan 9-15	Technology; Introduction	Chapter 1
2	Jan 16-22	Inference and Error	Chapter 2
3	Jan 23-29	Populations, Frames and Coverage	Chapter 3
4	Jan 30-Feb 5	Design and Sampling Error	Chapter 4
5	Feb 6-12	Design and Sampling Error	Chapter 4
6	Feb 13-19	Midterm 1: Feb 14 Data Collection Modes	Chapter 5
7	Feb 20-26	Data Collection Modes/Nonresponse	Chapters 5/6
8	Feb 27-Mar 5	Nonresponse	Chapter 6
9	Mar 6-12	Questions and Answers	Chapter 7
10	Mar 13-19	SPRING BREAK	----
11	Mar 20-26	Evaluating Questions	Chapter 8
12	Mar 27-Apr 2	Midterm 2: Mar 28 Postcollection Processing	Chapter 10
13	Apr 3-9	Postcollection Processing	Chapter 10
14	Apr 10-16	Nonprobability Samples	TBD
15	Apr 17-23	Ethical Research	Chapter 11
Exams	Apr 26-May 2	Final Exam: Thursday Apr 27 2:00pm-3:45pm	