

Social Statistics Syllabus

SOCI 210 – Fall 2026

“Statistical thinking will one day be as necessary for efficient citizenships as the ability to read and write.”

- Samuel S. Wilks (1951) paraphrasing from HG Wells’ book, *Mankind in the Making*
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Professor: Dr. Erick Axxe (he/they)

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Office: Mills 220

Office phone: 501.450.1445

Class time: MWF 8:10-9AM

Class location: Snoddy Lab (Bailey Library)

Student hours: Mondays and Wednesdays, 1:00–3:00 p.m. Feel free to stop by anytime during these hours. [Appointments](#) are encouraged and will receive priority.

We are lucky to also have access to a Teaching Assistant this semester, Britton Sechrist. Britton will be available to meet with on Tuesdays from 2-4 pm in Mills 306a.

Course Description

This course introduces the core principles of statistical reasoning and inference as they are used to study social phenomena. You will learn how data are summarized, analyzed, and interpreted to answer substantive questions about social life. Emphasis is placed not only on statistical techniques, but also on the assumptions, limitations, and interpretive choices that shape quantitative claims.

The course combines conceptual foundations with hands-on data analysis using R. You will begin by learning how to describe and visualize distributions and relationships in data before moving to probability, sampling, and statistical inference. Later in the course, you will learn to select, conduct, and interpret statistical tests for different kinds of research questions, including correlation and regression, t tests, analysis of variance (ANOVA), chi-square tests, and selected nonparametric methods.

Throughout the semester, our analytic focus will be the transition to adulthood. Using social data, we will investigate questions about young people’s experiences and the ways they vary across individuals, social groups, and contexts. A series of scaffolded labs will allow you to develop your statistical skills while progressively taking greater responsibility for choosing appropriate analyses and interpreting their results. These skills will culminate in a final project in which you develop and investigate your own statistical research question.

No prior experience with statistics or programming is expected. You will learn R through an accompanying course workbook and apply what you learn in class and through the labs. Basic mathematical skills are useful, but the primary emphasis of the course is on statistical reasoning:

understanding why an analysis is appropriate, interpreting what its results mean, recognizing what the evidence does and does not allow us to conclude, and communicating quantitative findings clearly. By the end of the course, you will be prepared not only to conduct introductory statistical analyses, but also to critically evaluate statistical evidence encountered in academic research, professional settings, news and public discourse, and everyday life.

This course meets in person three times a week (see above for specific details). Throughout the semester, students are expected to complete the course workbook and labs, actively participate during class sessions, complete two technical interviews, and develop a final statistical project through a series of scaffolded milestones. Students will also complete and present the *Stats in the World* assignment and present their final projects. Course materials, assignments, and resources will be available through Microsoft Teams and organized using the **Classwork** feature.

Learning Outcomes

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

- Describe and visualize social data using appropriate statistical summaries and graphs.
- Explain patterns, relationships, and uncertainty in data, including the role of probability and sampling variability.
- Formulate statistical questions and select appropriate methods based on the research question, variables, and study design.
- Conduct and interpret statistical analyses in R, including descriptive, correlational, and inferential methods.
- Evaluate statistical evidence, including its assumptions, limitations, and the distinction between association and causation.
- Communicate statistical findings clearly and critically evaluate quantitative claims in research and public discourse.

Required Materials and/or Technologies

- Textbook: Jennifer, Peszka, Kennedy Lindsay, Sestir Marc, and Chris Spatz. 2024. [*Exploring Statistics: Tales of Distributions*](#). 13th ed. Outcrop Publishing.
 - The ebook costs \$30.
- [*Exploring Statistics with R workbook*](#): The online workbook provides the R instruction for the course. You are expected to use it as a reference rather than memorize R code. Within the workbook, you'll find instructions for downloading:
 - R and RStudio: We will use R for statistical analysis and RStudio for writing and running code. Both are free.
 - Course R Projects: You will download R Projects containing the data, scripts, and other files needed for labs and the final project.
- Microsoft Teams: Course materials, assignments, deadlines, and resources will be organized using the *Classwork* feature.

No prior statistics or programming experience is expected. Statistics does require some basic math skills; review resources will be available for students who need a refresher.

Optional resources:

- [Introduction to Modern Statistics](#)
- [OpenStax Introductory Statistics](#)
- [Learning Statistics with R](#)
- [Open Learning Initiative: Statistical Reasoning](#)

Coursework

Labs: You will complete six labs using the course dataset. Labs ask you to adapt techniques introduced in the textbook and R workbook to new statistical questions. Most Fridays before a lab is due will include class time to work with support from the instructor and TA.

Technical Interviews: Two individual technical interviews replace traditional exams. You will interpret statistical information, explain concepts, and reason through statistical scenarios. The emphasis is on understanding and application rather than memorization.

Final Project: You will develop and investigate your own statistical research question using the course dataset. Four short milestones will scaffold the project throughout the semester. You will present your findings during the final exam period.

Stats in the World: You will identify a statistical claim made for a general audience, evaluate the evidence supporting it, and briefly present your assessment to the class.

Specifications Grading

This course uses specifications grading. Your final grade is determined by the work you successfully complete and the level of mastery you demonstrate. There are no points or percentages to average.

Most major assignments are evaluated at three levels:

- **Incomplete:** Does not meet one or more essential requirements.
- **Complete:** Meets the assignment requirements and demonstrates the expected level of statistical understanding.
- **Distinguished:** Meets all Complete requirements and demonstrates especially strong statistical reasoning, interpretation, and communication.

The requirements below are **minimum requirements**. To earn a particular grade, you must satisfy **every requirement** listed for that grade. Distinguished results also count as Complete results.

- **A:** Complete all 6 labs, both Technical Interviews, all 4 Project Milestones, Stats in the World, and the Final Project; earn at least 3 Distinguished results; have no more than 2 unexcused absences.
- **B:** Complete at least 5 labs, both Technical Interviews, at least 3 Project Milestones, Stats in the World, and the Final Project; earn at least 2 Distinguished results; have no more than 3 unexcused absences.
- **C:** Complete at least 4 labs, at least 1 Technical Interview, at least 3 Project Milestones, Stats in the World, and the Final Project; earn at least 1 Distinguished result; have no more than 5 unexcused absences.
- **D:** Complete at least 3 labs, at least 1 Technical Interview, at least 2 Project Milestones, and the Final Project; have no more than 7 unexcused absences. No Distinguished results are required.
- **F:** Does not satisfy all requirements for a D.

*Distinguished results may be earned on the six labs, two Technical Interviews, Stats in the World assignment, and Final Project. Project milestones are evaluated as Complete/Incomplete and do not count toward the Distinguished requirement.

See below for details on how absences are classified as excused or unexcused.

Deadlines, Resubmissions, and Tokens

Assignments should be submitted by the listed deadline. Most labs and project milestones have an automatic **48-hour grace period** during which late work may be submitted without requesting permission or providing an explanation. After the grace period, work will ordinarily not be accepted. Technical Interviews and presentations follow their scheduled dates and do not have an automatic grace period.

Resubmission tokens: Each student begins the semester with two resubmission tokens. A token allows you to revise and resubmit one previously submitted lab for a new evaluation. The entire lab may be improved, and the resubmission may earn either Complete or Distinguished. A resubmission must be submitted within one week (7 calendar days) of receiving feedback on the original assignment. After that deadline, the token may no longer be used for that assignment. Tokens may not be used for Technical Interviews, project milestones, Stats in the World, or the Final Project. Unused tokens have no effect on your final grade.

Extensions beyond these policies may be appropriate for significant circumstances such as illness, emergencies, approved accommodations, or college-sponsored activities. Contact me as soon as reasonably possible when such circumstances arise.

Instructor Feedback and Response Time:

- **Preferred contact method:** For general course concerns, please tag me in a comment on our course's [**discussion board Q & A on Teams**](#). If your question is specific to you, please email me (axxe@hendrix.edu). I will reply to emails within 48 hours on days when class is in session.

- **Class announcements:** I will send all important class-wide messages through the [General](#) tab on Teams.
- **Grading and feedback:** For assignments submitted before the due date, you can expect feedback and grades within **seven days**. Assignments submitted during the grace period may take longer to receive feedback.

[Course Schedule](#) [click link to see, subject to change]

Students are expected to complete assigned readings and workbook chapters **before the class meeting** for which they are listed.

Hendrix Resources

Academic integrity: Our academic integrity policy may be found in the Catalog in section [D.6.c.Academic Integrity](#). Assignments must reflect your original work. Properly cite any sources used.

Generative AI: The purpose of assignments in this course is to develop your ability to make statistical decisions, write and adapt R code, interpret results, and communicate statistical evidence. Work you submit must therefore reflect your own statistical reasoning and skills.

You **may not use generative AI to write, generate, or substantially modify R code for course assignments**. The course workbook and other course materials should be your primary resources for learning and adapting R code.

Generative AI tools such as ChatGPT, Claude, Gemini, and Microsoft Copilot may be used in two limited ways:

- **Troubleshooting:** You may use AI to help diagnose an error or software problem in code that you wrote or adapted yourself. For example, you may provide an error message and ask what it means. AI should help you understand and fix your work, not generate the analysis for you.
- **Editing:** You may use AI to provide feedback on grammar, clarity, organization, or presentation of work that you have already written. AI may not generate the statistical interpretation, argument, or substantive content for you.

You may not use AI to choose a statistical procedure, conduct an analysis, interpret statistical results, answer assignment questions, develop a research question, or generate writing that you submit as your own. You are responsible for evaluating any AI assistance you receive; AI tools can provide incorrect code and inaccurate statistical explanations.

If you use generative AI for an assignment, include a brief disclosure stating which tool you used, what you asked it to help with, and how you used its assistance. You do not need to paste the entire conversation unless I request it. The basic rule is simple: AI may help you troubleshoot or polish your work, but it may not do the statistical thinking, coding, or writing being assessed. If you are unsure whether a particular use is permitted, ask before using it. Prohibited or undisclosed AI use may constitute academic dishonesty under the Hendrix College Academic Integrity Policy.

Statement on diversity: Hendrix College values a diverse learning environment as outlined in the College's Statement on Diversity. All members of this community are expected to contribute to a respectful, welcoming, and inclusive environment for every other member of the community. If you believe you have been the subject of discrimination, please contact the Dean of Students Office (JB

Banks, banksa@hendrix.edu or the submit a [Title IX report](#). If you have ideas for improving the inclusivity of the classroom experience please feel free to contact Dr. Axxe. For more information on Hendrix non-discrimination policies visit Hendrix.edu/nondiscrimination.

Title IX Reports of Discrimination Based on Sex, including Sexual Harassment, Sexual Assault, Stalking, Dating Violence, or Gender-Based Harassment. (Follow link to see details.)

Health and wellbeing: Hendrix recognizes that many students face mental and/or physical health challenges. If your health status will impact attendance or assignments, please communicate with me as soon as possible. Students should contact the Office of Advising & Academic Success (AcademicSuccess@hendrix.edu) to begin the accommodation process. To maintain optimal health, please utilize campus resources like Hendrix Medical Clinic or Counseling Services (501.450.1448). Your health and wellbeing are important.

Class attendance: Our attendance policy may be found in the Catalog in section [D.6.e. Class Attendance](#). **If students must be absent from class, they are expected to email Dr. Axxe before class. Without prior notification, absences are unexcused (barring true emergencies).** Students will be excused for absences resulting from observance of religious holidays, cases of illness, and athletic competition, as well as any additional reasons as determined by the classroom teacher (e.g., conference travel, Model UN). Students do not need to present third-party documentation for absences related to physical or mental illness. Misrepresenting reasons for an absence to a classroom teacher is a violation of the Academic Integrity Policy.

The Writing Center: The Writing Center is a community of peers ready to assist you with your writing and communication projects, in all genres and fields, and at any stage of development. We work with you in one-on-one meetings that you can book in advance, or you can just drop in at our office in Bailey Library. Virtual appointments are available by special arrangement. To book appointments and for more information, visit www.hendrix.edu/writingcenter/, follow us on Instagram [@hdxwritingcenter](#), or contact pruneda@hendrix.edu. We look forward to working with you!

Hendrix Bailey Library: Bailey Library's mission is to collaborate and empower all members of our community so that they become their best selves, cherish the scope of human knowledge, and positively contribute to the world. Whether face-to-face or remote, librarians are happy to help locate quality resources supporting research and classroom work and to assist with the critical evaluation of academic information. Librarians provide individual research assistance by appointment. The library building is open seven days a week, and access to the library's online resources is available 24/7. You can visit the library's website at <https://www.hendrix.edu/baileylibrary/> for more information, to book an appointment, and to access the library's Discovery search, Class Guides, and full-text article databases.

ADA accommodations: As your instructor, it is my legal obligation to ensure that all students have equal access to course materials and equal opportunity to perform well in the course. In addition, "It is the policy of Hendrix College to accommodate students with disabilities, pursuant to federal and state law. Students should contact the Office of Advising & Academic Success (AcademicSuccess@hendrix.edu) to begin the accommodation process. Any student seeking accommodation in relation to a recognized disability should inform the instructor at the beginning of the course."

Technology: Much of the technology we interact with is made to be addictive. I suggest you find and use resources that will help you resist distractions. [Here's](#) a website with a list of website blockers. Similar software exists for apps on phones and tablets. Laptops and other technology are permitted when we are using them for course activities. Phones and unrelated use of technology are not permitted during class.

Additional Resources

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students for support. Furthermore, please notify me if you are comfortable in doing so. This will enable me to provide any resources that I may possess.

- **Local housing shelters and women's shelters:** [Research](#) indicates that a number of low-income college students face homelessness or transient/insecure housing accommodations. [Affordable Colleges Online's website](#) provides statistics about college homelessness as well a way to locate local services.
- **Food Pantries:** [Here's](#) a list of local food pantries.
- **Zotero:** [Zotero](#) is a free citation management software.
- **Grammarly:** [Grammarly](#) is a free software that checks and suggests fixes to grammatical errors.
- An [inclusive data resource hub](#).