

LALS 15: Truth, Justice, and Statistics
UC Santa Cruz, Department of Latin American and Latino Studies

Summer 2024 | Online Asynchronous Course

Instructional Team Information

Instructor: Carlos Martinez, MPH, PhD, Department of LALS (he/him/his)

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Office Hours: Thursdays 11am-1pm via Zoom: <http://bit.ly/3hUotJe>. Please sign up for office hours on this Google spreadsheet: <http://bit.ly/3IaB4T0>

Teaching Assistants (office hours will be posted on Canvas):

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Course Description

This course provides students with statistical methodological training and skills through the examination of social and cultural manifestations of truth as a tool to serve social justice efforts for Latinx and other minoritized students. Students are introduced to foundational statistical concepts, techniques, and methods. Topics include descriptive statistics, probability, hypothesis testing, and inferential statistics. Emphasis is on the analysis and interpretation of statistical data along with conversations of how statistics are used to advance policy change and social justice.

Course-Specific Learning Outcomes

By the end of this course, learners will have demonstrated and enhanced their ability to:

1. Understand and apply statistical concepts and techniques.
2. Understand how statistics can be used to address social inequalities.
3. Calculate and interpret basic descriptive and inferential statistics.
4. Critically read social justice articles and media reports based on quantitative data.

Program Learning Outcomes

By the end of this course, learners will also be proficient in the following areas prioritized in the LALS program learning outcomes.

1. **Critical Thinking.** Ability to analyze from a transnational/transborder/translocal perspective—to see the interconnections between Latin American and Latino issues, people, ideas, problems, and solutions. This includes key skills, such as understanding sources, comparing arguments, analysis, and historical perspective.
2. **Research Methods.** Working knowledge of social scientific and/or humanistic approaches to LALS relevant topics. This includes acquiring qualitative and quantitative

skills, gathering or obtaining research data, finding/using primary sources, and other research methods.

Course Format

The course will be taught in a remote teaching format, using asynchronous methods. Every week, video lectures, activities, readings, and other course material will be posted in two new modules on Canvas. In addition, the instructor and teaching assistants will hold weekly zoom office hours.

Required Texts

All required texts are posted on Canvas.

Course Grading Structure

| Assignment | Percentage of Grade |
|--|---------------------|
| Weekly group discussion forum posts (5 forums) | 25% |
| Quizzes (10 total) | 30% |
| Quarter project (part 1): Develop research question | 5% |
| Quarter project (part 2): Develop survey | 10% |
| Quarter project (part 3): Create frequency table | 10% |
| Quarter project (part 4): Find the numerical center in your data | 10% |
| Quarter project (part 5): Present your data | 10% |

Description of Assignments

Note: All assignments in this class are due Sunday before midnight each week. Be sure to take note of the due dates on Canvas and use your calendar to stay on track. All assignments are to be uploaded to the Canvas site. Assignments will **NOT** be accepted via email.

- 1. Weekly small group discussion forums (25%):** Each week, students will participate in a small group discussion forum (5 total forums). Students will be expected to: (a) write a post in response to an assigned video or reading and (b) reply to at least two other classmates' posts.
- 2. Quizzes (25%):** Short quizzes to be taken on Canvas in response to lectures and readings.
- 3. Quarter-long Statistics Project:** For this project, you will create a survey using Google Forms that you will administer to your classmates and other students and friends outside of this class. You will analyze and present the data you collected by using statistical methods. This quarter-long project consists of 5 smaller assignments.
 - Develop a research question (5%):** Develop an overall research question for your survey that will determine the focus of your survey questions. Peer review the research questions of other students.
 - Develop survey (10%):** Use Google Forms to create a survey that you will

administer to students in class and to friends and students outside of class.
Respond to five other students' surveys.

- **Create a frequency table (10%)**: Use the data you've collected to create a frequency table.
- **Find the numerical center in your data (10%)**: Determine the numerical center of one variable in the data you've collected.
- **Present your data (10%)**: Summarize your data by graphically or numerically presenting it.

Weekly Readings & Activities

(Readings and activities are to be completed by the day they are listed)

*Note: The content and chronology of this schedule is subject to change. Please make sure to refer to the Canvas page for most up to date schedule)

Week 1

Module 1A: Introduction to statistics

Videos and Readings:

- Watch LALS 15 course introduction video
- Watch Stats Fundamentals Lecture Video 1: Introduction to Statistics
- Watch video, "[How to spot a misleading graph - Lea Gaslowitz](#)"
- Read: Lynch, Scott M. (2013). *Using Statistics in Social Research*. Chapter 1: Introduction

Learning activities:

- Post in small group discussion forum 1 in response to video, "[How to spot a misleading graph - Lea Gaslowitz](#)"

Module 1B: Introduction to research

Videos and Readings:

- Watch Stats Fundamentals Lecture Video 2: Introduction to Research
- Read: Lynch, Scott M. (2013). *Using Statistics in Social Research*. Chapter 2: Overview of the Research Process

Learning activities:

- Take Lectures 1 & 2 Quiz
- Complete Quarter Long Statistics Project - Step 1: Research Question

Week 2

Module 2A: Types of data and levels of measurement

Videos and Readings:

- Watch Stats Fundamentals Lecture Video 3: Types of Data and Levels of Measurement
- Watch video, "[Eugenics and Modern Statistics](#)"
- Read: Bluman, Allan G. (2011). *Elementary Statistics: A Step by Step Approach* (8th Edition). Chapter 1: The Nature of Probability and Statistics
- Read: Clayton, Aubrey. (2020). [How Eugenics Shaped Statistics](#). *Nautilus Magazine*.

Learning activities:

- Take Lecture 3 Quiz
- Post in small group discussion forum 2 in response to video, "[Eugenics and Modern Statistics](#)" and "[How Eugenics Shaped Statistics](#)" article.

Module 2B: Summarizing data with descriptive statistics (Part 1: Qualitative Data)

Videos and Readings:

- Watch Stats Fundamentals Lecture Video 4: Descriptive statistics (Part 1: Qualitative Data)
- Read: Kozak, Kathryn. (2014). *Statistics Using Technology*. Chapter 2: Graphical Descriptions of Data. Section 2.1: Qualitative Data

Learning activities:

- Take Lecture 4 Quiz
- Complete Quarter Long Statistics Project - Step 2: Survey Development

Week 3

Module 3A: Summarizing data with descriptive statistics (Part 2: Quantitative Data)

Videos and Readings:

- Watch Stats Fundamentals Lecture Video 5: Descriptive statistics (Part 2: Quantitative Data)
- Watch Guest Presenter Video 1
- Read: Kozak, Kathryn. (2014). *Statistics Using Technology*. Chapter 2: Graphical Descriptions of Data. Section 2.2: Quantitative Data
- Read: Hillery, Allen. (2021). [How W.E.B Du Bois Used Data Visualization to Debunk Social Darwinism and Tell A Story of Resilience](#).

Learning activities:

- Take Lecture 5 Quiz
- Post in small group discussion forum 3 in response to Guest Presenter Video 1 and "[How W.E.B Du Bois Used Data Visualization to Debunk Social Darwinism and Tell A Story of Resilience](#)" article.

Module 3B: Descriptive statistics (Part 3: Measures of Central Tendency)

Videos and Readings:

- Watch Stats Fundamentals Lecture Video 6: Descriptive statistics (Part 3: Measures of Central Tendency)
- Read: Kozak, Kathryn. (2014). *Statistics Using Technology*. Chapter 3: Numerical Descriptions of Data. Section 3.1: Measures of Center.

Learning activities:

- Take Lecture 6 Quiz
- Complete Quarter Long Statistics Project - Step 3: Create a frequency table

Week 4

Module 4A: Probability

Videos and Readings:

- Watch Stats Fundamentals Lecture Video 7: Probability
- Watch Guest Presenter Video 2
- Read: Bluman, Allan G. (2011). *Elementary Statistics: A Step by Step Approach* (8th Edition). Chapter 4: Probability and Counting Rules

Learning activities:

- Take Lecture 7 Quiz
- Post in small group discussion forum 4 in response to Guest Presenter Video 2

Module 4B: Probability distributions

Videos and Readings:

- Watch Stats Fundamentals Lecture Video 8: Probability distributions
- Read: Kozak, Kathryn. (2014). *Statistics Using Technology*. Chapter 5: Discrete Probability Distributions & Chapter 6: Continuous Probability Distributions

Learning activities:

- Take Lecture 8 Quiz
- Complete Quarter Long Statistics Project - Step 4: Find the numerical center in your data

Week 5

Module 5A: Inferential statistics and hypothesis testing

Videos and Readings:

- Watch Stats Fundamentals Lecture Video 9: Inferential statistics
- Watch Guest Presenter Video 3

- Read: Kozak, Kathryn. (2014). *Statistics Using Technology*. Chapter 7: One-Sample Inference

Learning activities:

- Take Lecture 9 Quiz
- Post in small group discussion forum 5 in response to Guest Presenter Video 3

Module 5B: Presenting statistical results

Videos and Readings:

- Read: Lynch, Scott M. (2013). *Using Statistics in Social Research*. Chapter 11: Presenting Results of Statistical Analysis

Learning activities:

- Complete Quarter Long Statistics Project - Step 5: Present your data

Course Policies

Time Commitment

Per UCSC's Systemwide Senate Regulation 760, each academic credit corresponds to 3 hours of work per week. Since this course is a five-unit course taking place within the accelerated five-week time frame of summer session, students are expected to devote 30 hours per week on course-related activities.

Late Policy

All quizzes and assignments submitted late will receive a 25% daily grade deduction (this means that an assignment submitted after 4 days will receive a zero grade). Since this is a very short quarter and a large class, we can only make exceptions in extreme extenuating circumstance, such as a severe illness or family emergency. If this is the case, then you can submit a request for an extension using this [Google form](#). *****DO NOT email the professor or TAs to request an extension. All requests must be made using this form.*****

Principles of Community

UCSC is committed to promoting and protecting an environment that values and supports every person in an atmosphere of civility, honesty, cooperation, professionalism and fairness. I am committed to providing an atmosphere for learning that respects diversity and supports inclusivity. Our discussions will be guided by UCSC Principles of community available at: <https://www.ucsc.edu/principles-community/>

We need to work together to build this community of learning. I ask all members of this class to:

- Be open to and interested in the views of others
- Consider the possibility that your views may change over the course of the term
- Honor the unique life experiences of your colleagues
- Listen to each other's opinions and communicate in a respectful manner

- Keep confidential discussions that the community has of a personal nature
- Ground your comments in the texts we are studying. Refer frequently to the texts and make them the focus of your questions, comments, and arguments. This is the single most effective way to ensure respectful discussion and to create a space where we are all learning together.

Academic Integrity

All members of the UCSC community benefit from an environment of trust, honesty, fairness, respect, and responsibility. You are expected to present your own work and acknowledge the work of others in order to preserve the integrity of scholarship. Violations of the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student's transcript. For the full policy and disciplinary procedures on academic dishonesty, students and instructors should refer to the [Academic Misconduct page](#) at the [Division of Undergraduate Education](#).

Communication & Feedback Policies

Communication with the Instructor

Please use email to correspond about logistical issues and/or basic questions about course material. **When emailing, please include LALS 15 in the subject line of your email.** I will answer emails within 48 hours on weekdays but will not respond on weekends, so please be sure to speak with me during the week if you have questions or concerns. For more substantive issues, I will be holding weekly online office hours via Zoom. Please sign up for office hours on this Google document: <http://bit.ly/3IaB4T0>

Resources & Guidance for Students

Accessibility

UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please affiliate with the [Disability Resource Center](#) (DRC). I encourage all students to benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu. For students already affiliated, make sure that you have requested Academic Access Letters, where you intend to use accommodations. You can also request to meet privately with me during my office hours or by appointment, as soon as possible. I would like us to discuss how we can implement your accommodations in this course to ensure your access and full engagement in this course.

Content Advisory

This course examines some texts, images, and videos that contain descriptions and depictions of violence, hardship, and human suffering, which may be emotionally upsetting. I will do my best to provide individual warnings on the syllabus for course materials and in presentation slides for class content that are particularly sensitive. My hope is that these notifications will help your engagement by allowing you to prepare to work through challenging material. I encourage you to do what you need to care for yourself. If taking care of yourself means that you need to step outside during class, either for a short time or for the rest of the class, you may do so without academic penalty. If you do leave the class for a significant time, please make arrangements to get notes from another student or see me individually to discuss the situation.

Title IX/Care Advisory

UC Santa Cruz is committed to providing a safe learning environment that is free of all forms of gender discrimination and sexual harassment, which are explicitly prohibited under Title IX. If you have experienced any form of sexual harassment, sexual assault, domestic violence, dating violence, or stalking, know that you are not alone. The [Title IX Office](#), the [Campus Advocacy, Resources & Education](#) (CARE) office, and [Counseling & Psychological Services](#) (CAPS) are all resources that you can rely on for support.

Please be aware that if you tell me about a situation involving Title IX misconduct, I am required to share this information with the Title IX Coordinator. This reporting responsibility also applies to course TAs and tutors. Confidential resources are available through [CARE](#). Confidentiality means CARE advocates will not share any information with Title IX, the police, parents, or anyone else without explicit permission. CARE advocates are trained to support you in understanding your rights and options, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and more. You can contact CARE at (831) 502-2273 or care@ucsc.edu.

Tutoring and Learning Support

At [Learning Support Services](#) (LSS), undergraduate students build a strong foundation for success and cultivate a sense of belonging in our Community of Learners. LSS partners with faculty and staff to advance educational equity by designing inclusive learning environments in Modified Supplemental Instruction, Small Group Tutoring, and Writing Support. When students fully engage in our programs, they gain transformative experiences that empower them at the university and beyond.

The Writing Center

The Writing Center works with all students, in all genres, at all stages of the writing process. Visit their page to make an online appointment: <https://writingcenter.ucsc.edu/index.html>

Slug Support Program

College can be a challenging time for students and during times of stress it is not always easy to find the help you need. [Slug Support](#) can give help with everything from basic needs (housing, food, or financial insecurity) to getting the technology you need during remote instruction. To get started with SLUG Support, please contact the [Dean of Students](#) Office at 831-459-4446 or you may send us an email at deanofstudents@ucsc.edu.

Slug Help/Technology

The [ITS Support Center](#) is your single point of contact for all issues, problems or questions related to technology services and computing at UC Santa Cruz. To get technological help, simply email help@ucsc.edu.