

STAT 17: Statistics for Business and Economics

Spring 2026

Table of contents

1	COURSE INFORMATION	2
1.1	Course Description	3
1.2	Instructor Bio	3
2	LEARNING OUTCOMES	3
3	REQUIRED MATERIALS, TEXTBOOKS, AND TECHNOLOGY	4
3.1	Laptop or Desktop Computer	4
3.2	Technology	4
3.3	Required Textbook	4
3.4	Prerequisites	5
4	COMMUNICATION	5
5	TEACHING TEAM	5
5.1	Teaching Assistants	5
5.2	Learning Support Services (LSS)	6
6	COURSE SCHEDULE	6
6.1	Lectures	6
6.2	Discussion Sections	6
7	ASSIGNMENTS & ASSESSMENT	7
7.1	Grade Breakdown	7
7.2	In-Class Work (30%)	7
7.2.1	Lecture Participation (15%)	7
7.2.2	Discussion Section Activities / DSAs (15%)	7

7.3	Outside of Class (5%)	8
7.3.1	Homework (5%)	8
7.4	Exams (65%)	8
7.4.1	Midterm Exam (30%)	8
7.4.2	Midterm Wrapper (5%)	8
7.4.3	Final Exam (30%)	8
7.5	Grading Scale	8
7.6	Grading Timeline	9
7.7	Flexibility Built Into Assessments	9
7.8	Expected Time Commitment	9
8	ATTENDANCE AND COURSE DELIVERY	10
8.1	This Is an In-Person Course	10
9	ARTIFICIAL INTELLIGENCE (AI) POLICY	10
9.1	Bottom Line	10
9.2	Why This Matters	10
9.3	Permitted Uses of AI	10
10	COURSE WEEKLY SCHEDULE	11
11	TIPS TO SUCCEED IN THIS CLASS	12
12	STUDENT FEEDBACK	13
13	ACADEMIC INTEGRITY	13
13.1	Academic integrity includes, but is not limited to, the following:	13
13.2	Academic misconduct includes, but is not limited to, the following:	13
14	ACCESSIBILITY	14
15	RELIGIOUS ACCOMMODATION	14
16	PRINCIPLES OF COMMUNITY	14
17	TITLE IX / CARE ADVISORY	15
18	STUDENT SUPPORT SERVICES	15

Syllabus subject to change. First version: March 20, 2026

1 COURSE INFORMATION

Instructor: Marcela Alfaro Córdoba **Email:** macordob@ucsc.edu

Students can address me as Professor Alfaro Córdoba, Dr. Alfaro Córdoba, or simply Marcela (pronounced [mahr-sahl-ah]). Please avoid calling me (or any of your female instructors) Miss or Ms.

Office Hours:

- Tuesdays and Thursdays 11:25 am – 12:00 pm, in person (after class, outside the classroom)
- Online by appointment: <https://calendar.app.google/cXiJMDYagvvhW6zF9>

Class Times: Tuesdays and Thursdays, 9:50–11:25 am **Location:** Classroom Unit 002
Course Canvas: <https://canvas.ucsc.edu/courses/92999>

1.1 Course Description

This course introduces you to statistical methods commonly used in business and economics. The course is organized in two main parts. In the first half, you will learn descriptive methods, probability, random variables, expected values, and sampling techniques. In the second half, you will explore statistical inference, including estimation, confidence intervals, hypothesis testing, one- and two-sample problems, correlation, and simple linear regression. Throughout the quarter you will work with Google Sheets in lecture and learn STATA in the companion lab (STAT 17L). By the end of the quarter, you will be comfortable performing statistical analysis using both tools, giving you valuable skills for future coursework and your career.

1.2 Instructor Bio

I am an applied statistician with an interest in statistical applications to environmental and biological problems. I also work on Statistics and Data Science Education. I have been teaching at UCSC since 2021, with more than 15 years of experience teaching probability and statistics. If you are curious about my projects, you can check my personal webpage: <https://malfaro2.github.io/>

Office hours are a space to talk to the instructor. You do not need to be prepared to attend; you can show up with general or specific questions. You are also more than welcome to stop by if you want to talk about anything related to the class or even to a future career in Statistics or Data Science.

2 LEARNING OUTCOMES

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

1. Produce appropriate graphical and numerical descriptive statistics for different types of data.
2. Apply probability rules and concepts related to discrete and continuous random variables to answer questions within a business and economics context.
3. Demonstrate understanding of (a) how point estimates for unknown population quantities are developed from sample data, and (b) how sampling distributions for point estimates are derived.
4. Explain the importance of the Central Limit Theorem (CLT) and apply it to relevant problems.
5. Conduct and interpret a variety of hypothesis tests and confidence intervals to support decision-making in a business and economics context.
6. Use simple regression models to analyze the underlying relationships between observed variables through hypothesis testing, confidence intervals, and predictions.

A detailed list of learning outcomes is available [in this link](#)

3 REQUIRED MATERIALS, TEXTBOOKS, AND TECHNOLOGY

3.1 Laptop or Desktop Computer

You will need a computer for homework, in-class activities, and discussion sections. You will not be able to complete most of the work on a mobile device. Students who need a laptop can make use of the library's borrow program: <https://library.ucsc.edu/services/computing/borrow-a-laptop>

3.2 Technology

Personal computer with Zoom, Canvas, GradeScope, and Google Suite access. Zoom links will be posted in Canvas when necessary. A free Poll Everywhere account (the instructor will cover the cost—please do not pay for it).

3.3 Required Textbook

Introduction to Business Statistics. OpenStax. 2nd edition. <https://openstax.org/details/books/introductory-business-statistics-2e>

Lectures are designed to supplement the textbook reading, not substitute for it. Please make sure you have access to the textbook to complete your readings and homework.

3.4 Prerequisites

Prerequisite(s): Score of 300 or higher on the Mathematics Placement Examination (MPE), or AM 3, AM 11A, MATH 3, or MATH 11A. MATH 19A is strongly recommended. Concurrent enrollment in STAT 17L is required.

4 COMMUNICATION

Questions, announcements, and requests: We will be available via email, but please expect a turnaround time of 2–3 business days. Office hours or Ed Discussion are a more efficient way to reach us. Please do not use Canvas messages; you will receive an automatic reply directing you elsewhere.

New to Ed Discussion? This guide can help: <https://edstem.org/quickstart/ed-discussion.pdf>

Contact priority:

1. Ed Discussion (see link on Canvas) ← best option, most efficient
2. Email (please use this as a last resort; not recommended for urgent matters)

Lectures: In person, mandatory attendance. Lectures will be recorded and posted on Canvas by the end of each class day.

5 TEACHING TEAM

5.1 Teaching Assistants

TA	Discussion Sections	Office Hours
Yongqi Chen	B, C	See Ed Discussion
Qianyu Dong	E, F	See Ed Discussion
Lisette Villa	D, H	See Ed Discussion
Jacob Fontana	A, G	See Ed Discussion

5.2 Learning Support Services (LSS)

STAT 17 Small Group Tutor: Zadok Panunto (he/him), zpanunto@ucsc.edu. The Small Group Tutoring for STAT 17 offers weekly, recurring sessions designed to support your success in the course. Groups are typically limited to a maximum of four students to create a focused, collaborative, and student-centered learning environment.

These sessions provide an opportunity to meet peers, review course concepts, work through practice problems, and ask questions in a more individualized setting. Students who attend regularly often build stronger understanding and perform better throughout the quarter. To learn more or sign up, visit: <https://learningsupport.ucsc.edu/programs/tutoring/#group-tutoring>

STAT Study Hall Tutor: Sharry Eydel (she/her), seydel@ucsc.edu. The STAT Study Hall supports STAT 5, 7, and 17. It is a drop-in, low-stakes space where you can work with peers or receive individual tutoring. Students who attend weekly tend to earn higher final grades.

Readers: Misha Tran Burton, Ingrid Eliza Fowler-White, Evelyn Ruedas, and Amani Sikand.

6 COURSE SCHEDULE

6.1 Lectures

When: Tuesdays and Thursdays, 9:50–11:25 am | **Where:** Classroom Unit 002

Lectures are mandatory and will be recorded. Recordings will be posted on Canvas by the end of each class day.

6.2 Discussion Sections

Discussion sections begin the second week of instruction.

Section	Day	Time	Location	TA
STAT 17-01A	Monday	8:00–9:05 am	Engineer 2 192	Jacob Fontana
STAT 17-01B	Monday	12:00–1:05 pm	Cowell Com 143	Yongqi Chen
STAT 17-01C	Tuesday	3:20–4:25 pm	Phys Sciences 136	Yongqi Chen
STAT 17-01D	Tuesday	5:20–6:25 pm	Cowell Clrm 131	Lissette Villa
STAT 17-01E	Wednesday	9:20–10:25 am	Cowell Acad 113	Qianyu Dong
STAT 17-01F	Wednesday	1:20–2:25 pm	Engineer 2 192	Qianyu Dong
STAT 17-01G	Monday	12:00–1:05 pm	Engineer 2 192	Jacob Fontana

Section	Day	Time	Location	TA
STAT 17-01H	Tuesday	6:40–7:45 pm	Cowell Acad 113	Lissette Villa

7 ASSIGNMENTS & ASSESSMENT

Assessment for the course consists of six components: lecture participation, discussion section activities, homework, the midterm exam, the midterm exam wrapper, and the final exam.

7.1 Grade Breakdown

Component	Weight	Notes
Lecture Participation	15%	85% attendance + Poll Everywhere + surveys
Discussion Section Activities (DSAs)	15%	Top 5 of 8 count (3 pts each)
Homework	5%	Top 5 of 9 count (1 pt each)
Midterm Exam	30%	Week 5, Thu April 30, during class
Midterm Wrapper	5%	Reflective exercise, submitted by hand
Final Exam	30%	Mon June 8, 12:00–2:00 pm

7.2 In-Class Work (30%)

7.2.1 Lecture Participation (15%)

- Attend at least 85% of lectures (19 total, excluding the midterm review) for full credit.
- Complete the syllabus acknowledgment, Quiz 0, and all Canvas surveys.
- Participate actively via Poll Everywhere.

Points: 5 quizzes/surveys + 10 Poll Everywhere = 15 points total.

7.2.2 Discussion Section Activities / DSAs (15%)

- 8 DSAs total, completed in groups of 2. You must be present in your section to receive credit.
- Submitted on paper (handwritten) at the end of section; TAs upload to GradeScope.

- Only your 5 highest grades count toward your final grade.

Points: 3 points each \times 5 = 15 points total.

7.3 Outside of Class (5%)

7.3.1 Homework (5%)

- 9 weekly assignments, assigned on Fridays and due the following Friday, submitted via Canvas.
- Must be solved by hand and scanned. Typed answers receive 0 points.
- Graded on completion (all problems must be attempted).
- Only your 5 highest grades count toward your final grade.

Points: 1 point each \times 5 = 5 points total.

7.4 Exams (65%)

7.4.1 Midterm Exam (30%)

- **Date:** Thursday, April 30 (Week 5), during class time.
- **Duration:** 1.5 hours. In person, on paper.
- **Coverage:** First four weeks of course material.

7.4.2 Midterm Wrapper (5%)

A reflective exercise completed after your midterm is returned. You will review your performance and instructor feedback, then identify strategies to adapt your approach going forward. Submitted by hand via Canvas. Please note that this assignment does not have a second submission opportunity.

7.4.3 Final Exam (30%)

- **Date:** Monday, June 8, 12:00–2:00 pm. In person, in the regular classroom.
- **Duration:** 2 hours.
- **Coverage:** Comprehensive — all course topics.

7.5 Grading Scale

Letter	Score Range	Letter	Score Range
A+	99	C+	70–74.99
A	95–98.99	C	65–69.99
A–	90–94.99	C–	60–64.99
B+	85–89.99	D	50–59.99
B	80–84.99	F	< 50
B–	75–79.99	P/NP	65 / < 65

7.6 Grading Timeline

- DSA regrades: within 1 week of grades being posted (via GradeScope).
- Final exam questions/regrades: by June 12, 11:59 pm (via GradeScope).
- All other grade questions: by June 12, 11:59 pm.
- Final grades posted: June 13. No modifications after this date.

7.7 Flexibility Built Into Assessments

The flexibility listed below is what is available. No additional accommodations will be provided beyond what is described here.

Assignment	Opportunities	Flexibility	Weight
Lecture Participation	19 lectures + 5 surveys	85% attendance = full points	15%
DSAs	8 (3 pts each)	Top 5 count	15%
Homework	9 (1 pt each)	Top 5 count	5%
Midterm & Final	In person, on paper	Extra credit included	60%
Midterm Wrapper	Submit via Canvas	Must be handwritten	5%

7.8 Expected Time Commitment

This is a 5-unit course. Plan for approximately 15 hours per week:

- 3.25 hours: Lecture
- 1 hour: Discussion section
- 5 hours: Textbook reading
- 5.75 hours: Homework and review

8 ATTENDANCE AND COURSE DELIVERY

8.1 This Is an In-Person Course

This course thrives on active participation and collaborative learning. Regular attendance at both lectures and discussion sections is essential for your success. All exams are held in person to ensure fairness and academic integrity. If you are unable to attend consistently this quarter, we encourage you to consider enrolling when you can fully engage with the learning community.

9 ARTIFICIAL INTELLIGENCE (AI) POLICY

9.1 Bottom Line

Using generative AI tools (e.g., ChatGPT, Claude) to complete graded assignments constitutes academic misconduct. AI may be used as a study aid to generate practice problems or explore concepts — never to produce work submitted for a grade.

9.2 Why This Matters

Graded assignments are learning opportunities, not just evaluation checkpoints. Working through problems yourself builds the understanding and problem-solving ability that will serve you long after this course. AI-generated solutions bypass that process, and AI tools will not be available during exams.

9.3 Permitted Uses of AI

- Generating practice problems or variations on homework scenarios to test your understanding.
- Asking for step-by-step explanations of concepts or alternative ways of thinking about a topic.
- Checking your approach to a problem after you have solved it independently.

Important caution: AI can and does produce incorrect information. Always cross-check AI explanations against your course materials.

Protect course materials: Do not upload textbook excerpts, handouts, or assignments to AI platforms. This creates copyright and intellectual property concerns. Instead, ask AI about general concepts or create your own examples.

If you are ever uncertain whether a particular use of AI is appropriate, please ask before submitting.

10 COURSE WEEKLY SCHEDULE

This schedule may change during the quarter. Please consult the course webpage for the most up-to-date version.

Week	Topics	Textbook	Evaluations & Assignments
1	Introduction to Statistics: course roadmap, syllabus, LSS workshop	Ch. 1	Survey 1
1	Sampling and Data	Ch. 1	HW 1 assigned (Ch. 1–2)
2	Descriptive Statistics	Ch. 2	DSA 1
2	Descriptive Statistics	Ch. 2	HW 2 assigned (Ch. 2–3)
3	Probability Topics	Ch. 3	DSA 2
3	Probability Topics	Ch. 3	HW 3 assigned (Ch. 3–4)
4	Discrete Random Variables	Ch. 4	DSA 3
4	Discrete and Continuous Random Variables	Ch. 4–5	HW 4 assigned (Ch. 5)
5	Continuous Random Variables (review)	Ch. 5–6	DSA 4 (review)
5	Midterm Exam	—	HW 5 assigned (Ch. 6–8)
6	CLT + Confidence Intervals	Ch. 7–8	DSA 5
6	Hypothesis Testing: One Sample	Ch. 9	HW 6 assigned (Ch. 9–10)
7	Hypothesis Testing: One Sample	Ch. 9	DSA 6; Midterm Wrapper; Survey 2
7	Hypothesis Testing: Two Samples	Ch. 10	HW 7 assigned (Ch. 11–12)

Week	Topics	Textbook	Evaluations & Assignments
8	Chi-Square Distribution + Tests of Independence	Ch. 10	DSA 7
8	F Distribution and One-Way ANOVA	Ch. 11	HW 8 assigned (Final Practice, Ch. 12–13)
9	F Distribution and One-Way ANOVA	Ch. 12	DSA 8
9	Linear Regression and Correlation	Ch. 13	—
10	Linear Regression and Correlation	Ch. 13	—
10	Review for the Final Exam	Ch. 13	—
Finals	Final Exam	Ch. 1–13 (comprehensive)	—

Final Exam: Monday, June 8 · 12:00–2:00 pm · Regular classroom · Comprehensive (all topics) · In person, on paper.

11 TIPS TO SUCCEED IN THIS CLASS

- Stay on top of the weekly textbook readings — they are the foundation for understanding new concepts introduced in lecture.
- Show up and engage actively in lectures and discussion sections. Your participation benefits both you and your classmates.
- Complete homework and DSAs consistently. Regular practice makes exam preparation much more manageable.
- Build your formula sheet each week by adding new theorems, formulas, and key properties from each class session.
- Form a study group early and stick with it. Learning together makes challenging material more approachable.
- Use office hours early and often. No question is too small, and getting help before problems compound is always the right move.

12 STUDENT FEEDBACK

At the end of the quarter you will be asked to complete a Student Experience of Teaching (SET) survey. SETs give you an opportunity to provide honest and constructive feedback on your learning experience. I use this anonymous feedback to make improvements that help future students learn more effectively. More information here: <https://its.ucsc.edu/sets/index.html>

13 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 and the value of the degrees you and your peers are working so hard to earn.

13.1 Academic integrity includes, but is not limited to, the following:

- Being transparent and forthright in your academic work
- Reading the syllabus
- Asking questions about this academic integrity policy if you do not understand it
- Following exam rules
- Using only permitted materials during an exam
- Viewing exam materials only when permitted by your instructor
- Keeping what you know about an exam to yourself
- Incorporating proper citation of all sources of information
- Disclosing the use of any editing software or grammar tools
- Submitting your own original work

13.2 Academic misconduct includes, but is not limited to, the following:

- Disclosing exam content during or after you have taken an exam
- Accessing exam materials without permission
- Copying or purchasing any material from another student or from another source and submitting it for grading as your own
- Plagiarism, including use of internet material without proper citation
- Submitting work that was produced in whole or in part by generative artificial intelligence
- Failing to properly cite external sources when their use is permitted
- Using a cell phone or other device to obtain outside information during an exam without explicit permission from the instructor
- Submitting work completed for another class without prior instructor permission (self-plagiarism)

Violations of the academic integrity policy can result in a permanent notation on your transcript, a failing grade on an assignment or in the course, and/or dismissal from the university. For the full policy and formal resolution procedures, please refer to the [Academic Integrity Office](#) and [Academic Integrity Policy](#) pages at the [Division of Undergraduate Education](#).

14 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 and require accommodations to achieve equal access in this course, please contact the Disability Resource Center (DRC) at 831-459-2089 or drc@ucsc.edu. If you are already affiliated with the DRC, please be sure to request your Academic Access Letters. If you are not sure whether you are eligible for accommodations, please contact the DRC to schedule an evaluation. If you would like to discuss your accommodations with me, or if you have any other concerns related to accessibility in this course, please request to meet privately with me during office hours or by appointment.

15 RELIGIOUS ACCOMMODATION

UC Santa Cruz welcomes diversity of religious beliefs and practices, recognizing the contributions differing experiences and viewpoints can bring to the community. There may be times when an academic requirement conflicts with religious observances and practices. If that happens, students may request reasonable accommodation. The instructor will review the situation in an effort to provide a reasonable accommodation without penalty. Please discuss the conflict and your requested accommodation with me early in the term. You or your instructor may also seek assistance from the [Dean of Students office](#).

16 PRINCIPLES OF COMMUNITY

The University of California, Santa Cruz expressly prohibits students from engaging in conduct constituting unlawful discrimination, harassment, or bias. I am committed to providing a learning environment that respects diversity and supports inclusivity. We need to work together to build this community of learning. I ask all members of this class to:

- Be open to and genuinely interested in the views of others
- Consider the possibility that your views may change over the course of the term
- Be aware that this course asks you to reconsider some “common sense” notions you may hold
- Honor the unique life experiences of your colleagues
- Appreciate the opportunity we have to learn from each other

- Listen to each other’s opinions and communicate in a respectful manner
- Keep confidential discussions that the community has of a personal or professional nature
- Ground your comments in the course material — referring frequently to the texts and making them the focus of your questions, comments, and arguments is the single most effective way to ensure respectful discussion and to create a space where we are all learning together

17 TITLE IX / CARE ADVISORY

The Title IX Office is committed to fostering a campus climate in which members of our community are protected from all forms of sex discrimination, including sexual harassment, sexual violence, and gender-based harassment and discrimination. Title IX is a neutral office committed to safety, fairness, trauma-informed practices, and due process.

Title IX prohibits gender discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking. If you have experienced sexual harassment or sexual violence, you can receive confidential support and advocacy at the Campus Advocacy Resources & Education ([CARE](#)) Office by calling (831) 502-2273. Counseling & Psychological Services ([CAPS](#)) can also provide confidential counseling support at (831) 459-2628. You can report gender discrimination directly to the [University’s Title IX Office](#) at (831) 459-2462. Reports to law enforcement can be made to UCPD at (831) 459-2231 ext. 1. For emergencies, call 911.

18 STUDENT SUPPORT SERVICES

To learn about the many student services offered at UCSC — such as Learning Support Services (LSS), Resource Centers, or Slug Support — I encourage you to visit the [Campus Resources website](#) or click on the “Resources” button (a slug in a heart) at the bottom of the navigation ribbon on the left side of our Canvas page.

This syllabus is subject to change. Any changes will be announced in class and posted on Ed Discussion.