

Statistics 203

Fall 2021

Course Policies and Syllabus

Instructor: Robert Lund, rolund@ucsc.edu, E2-519, (864) 247-7342.

Class Time: Tuesdays and Thursdays 1:30 - 3:05 PM, E2 194.

Required Text: *Probability and Statistics*, Fourth Edition, by DeGroot and Schervish (2012).

Course Summary: The course is designed to upgrade your understanding of probability. This is an old-fashioned chalkboard and problem set class. Topics covered are detailed in the tentative schedule below.

Learning Outcomes: After completing this course, the successful student will be able to:

1. Compute probabilities of many events.
2. Become fluent with conditional probability.
3. Know the statistical distributions commonly encountered in our discipline.
4. Understand univariate and multivariate distribution functions of various types.
5. Become acquainted with the central limit theorem and the law of large numbers.
6. Be able to work problems involving all of the above concepts.

Lectures: The current plan is to go back to in-person lectures this quarter. This said, lectures may revert to Zoom should Covid rage again. A lecture or two may need to be given via Zoom to accommodate the instructor's travel schedule.

Homework: There will be approximately six homework assignments composed of 10 questions each during the quarter. While students may work together on the homework, each student must turn in their own homework (photocopied or other obvious homework clones will not be accepted). The point of the homework is to learn and practice the material; hence, while copying someone else's homework solutions may get you a fine homework grade, you will have difficulty on the tests.

Instructor Office Hours:

Tuesday 12:30 - 1:30 PM
Thursday 3:05 - 4:05 PM

Grade Decomposition:

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|----------|-----|
| Homework | 20% |
| Test I | 20% |
| Test II | 20% |
| Final | 40% |

Final Exam: There will be a final exam on Monday, December 6 from 12:00 - 3:00 PM.

Course Schedule: The following dates represent a tentative narration of the course. Course pace is subject to change.

| Week | Book Chapters | Topics |
|------|---------------|---|
| 1 | 1 | Probability |
| 2 | 2 | Probability and Conditional Probability |
| 3 | 2 | Conditional Probability |
| 4 | 3 | Random Variables |
| 5 | 3 | Random Variables |
| 6 | 4 | Expectation |
| 7 | 5 | Classical Distributions |
| 8 | 5 | Classical Distributions |
| 9 | 6 | Some Limit Theorems |
| 10 | 6 | Some Limit Theorems |

Late Homework: Not accepted. Any missed tests will result in a pro-rated grade with the completed material. I DO NOT GIVE MAKE-UP EXAMS.

Accommodations: 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 contact the Disability Resource Center, which offers services that are confidential and free of charge. Contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu. If you have an Accommodation Authorization Letter from the DRC, please submit it to the instructor by email, preferably within the first two weeks of the quarter.

Academic Integrity: Academic integrity is a core principle at UCSC. Cheating in any form harms everyone in our community. If cheating is suspected the academic records of all UCSC students become suspect, and much less valuable when they graduate. Cheating in any form will not be tolerated. Students who help others cheat are also considered cheaters. Students caught cheating will be reported to their college provost. Cheating will impact your grade in this class, in addition to the administrative consequences determined by your provost. You are expected to work alone on the tests and final exam. This means no communication (talking, texting, emailing, online messaging, etc.) to anyone until after completion of the tests.