Stat 135: Concepts of Statistics

University of California, Berkeley
Summer 2025

General Information

Lecture: T, W, Th 10:00 – 11:59 am, Lewis 9
Lab 101: Tu, We 3:00 pm - 4:29 pm, Th 3:00 pm - 3:59 pm, Evans 334
Lab 102: Tu, We 4:30 pm - 5:59 pm, Th 4:30 pm - 5:29 pm, Evans 334
Instructor:
Michael Hochster
Office Hours: T / Th 1:00pm - 2:00pm, Evans 339
Email: hochster@berkeley.edu

GSI:
Yichen Xu
Office Hours: Mon / Fri 4:00pm-5:00pm Evans 426
Email: yichen_xu@berkeley.edu

Prerequisites

- A course in probability theory equivalent to Stat 134.
- Multivariate calculus
- Knowledge of R will help, but we will cover the basics
- Familiarity with linear algebra is helpful but will only be necessary at the end of the course when we cover chapter 14.

Textbook

John Rice, Mathematical Statistics and Data Analysis (3rd edition). We will be using this book often for homework assignments, so be sure you have access to a copy.

Topics Included in Course

This is a survey course in statistical theory and methodology. Topics include parameter estimation, statistical inference, non-parametric methods, linear models, and a little bit of Bayesian statistics. The purpose of the course is to provide a conceptual foundation for future study of and work in statistics.

We will cover parts of chapters 4, 6, 7, 8, 9, 11,12,13 and 14 in Rice.

Tentative Course Schedule

Week	Dates	Tue	Wed	Thur
1	6/24 – 6/26	Intro	7.3.1, 8.1-8.4	8.4, 4.6
2	7/1 – 7/3	8.5	8.5, 8.7	8.5, 8.7, 8.8 HW 1 due Friday 7/4 Quiz 1
3	7/8 – 7/10	8.8, 9.2	9.2, 9.3	9.4, 11.1 HW 2 due Friday 7/11
4	7/15 – 7/17	Midterm Review	Midterm	11.1, 11.2 HW 3 due Friday 7/18 Quiz 2
5	7/22 – 7/24	9.5	13.3, 13.4	11.2, 11.3 HW 4 due Friday 7/25
6	7/29 – 7/31	12.2	Chap 14	Chap 14 HW 5 due Friday 8/1 Quiz 3
7	8/5 – 8/7	8.6	TBD	TBD HW 6 due Friday 8/8 Quiz 4
8	8/12 – 8/14	Review	Final Exam	

Quizzes / Exams

There will be one in-class midterm and one in-class final. The test dates are:

- Midterm: Wednesday, July 16
- Cumulative Final: Wednesday, August 13

There will be 4 quizzes to test understanding on Thursdays weeks 2, 4, 6, 7. The quizzes will be completed during lab time. The material on the quizzes will include everything up to (and including) the Tuesday of the week of the quiz. For example, Quiz 1 is on the Thursday of Week 2 and will include content up to Tuesday of Week 2.

There will be no make-up quizzes, but we will drop your lowest score.

Important Deadlines

- Add courses, Drop courses, or Withdraw from Summer Sessions - 7/3
- Change Grading Option - 8/1
- Please see Berkeley Summer Sessions Schedule for complete Academic Calendar.

Ed Discussion Board

- There will be an Ed Discussion board for this class that can be accessed via bCourses.

Grading

Your final grade will be calculated as:

- 40% final exam
- 25% midterm
- 20% quizzes (drop lowest score)
- 15% weekly assignments (drop lowest score)

If your final exam score is higher than your midterm score, your midterm score will be raised to be equal to the final score.

Assignments

Weekly assignments will be due at 11:59 PM on the day that is listed in the course schedule. Assignments will be graded primarily for completion:

- ✓: Mostly complete and correct (some mistakes are ok): 100 points
- ✓-: Substantially incorrect and/or incomplete work: 50 points
- 0: Not handed in or unreadable: 0 points

Only assignments submitted online via Gradescope will be accepted. Please see the Gradescope website for assistance with making an account and submitting assignments. Please follow each of the following guidelines when submitting homework assignments:

- Each problem needs to begin on a new page (1a and 1b can be on the same page, but problems 1 and 2 need to be on separate pages).
- You must select which pages correspond to which problems when you submit the PDF of your assignment on Gradescope.

Late homework of ✓ quality will receive 50 points until solutions are posted on bCourses (not accepted on or after the day solutions posted). Solutions for assignments 1, 2, 4, and 5 will be posted four days after they are due. Note: late homework will not be accepted for assignments 3 and 6 except as provided by disability accommodations, since their solutions will be made available the next day to allow students to prepare for the midterm and final.

Section

Section is a very important part of this class, at which time your GSI will cover prerequisite material, give midterm and final reviews, and allow you to practice doing homework-type questions and material that will help you understand the course.

Students with Disabilities

If you have a disability, or think you may have a disability, you can work with the Disabled Students' Program (DSP) to determine any accommodations you may need to have equal access in this course. I am available if you have any questions or concerns about your accommodations, but in the event of a disagreement, the proper procedure is for you to work with your DSP Specialist and your DSP Specialist to work with me toward a resolution.
If you have a DSP letter of accommodation, please get in touch with me as soon as possible so that the GSI and I can provide the necessary accommodations.

Other Course Policies

- Laptops in class: I encourage you to bring your laptops to class for purposes related to the class. Using a laptop for unrelated tasks is a distraction to other students (and yourself!) and is prohibited.
- Homework: You are welcome to discuss the homework in small groups (2-3). You will need to write up your own work individually, including writing your own code.
- Academic integrity: Any test or assignment submitted by you and that bears your name is presumed to be your own original work that has not previously been submitted for credit in another course. While you are encouraged to work together on homework assignments, the writeup must be your own. Any evidence of cheating or plagiarism will be subject to disciplinary action, at minimum a failing grade on the assignment in question. For more information, please see the Berkeley Honor Code.
- Mode of Instruction: The format of the class is tailored for in-person instruction. The lectures will be recorded, but mostly for students who attend to look back on. The GSI will likely not record the lab sections, though that is subject to change. Quizzes will be administered during lab sections and the midterm and final will be in-class.