

Instructor: Jessy Hwang

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Lectures: MWF 11:30am–12:20pm, Thornton 102

Office Hours: TBD

Textbook: Blitzstein and Hwang, *Introduction to Probability*. The textbook is completely optional. All material required for homework and exams will be covered in lecture.

Prerequisites: Multivariate calculus (MATH 52) and a calculus-based first course in probability (STATS 117, CS 109, or MS&E 120). We will be using: differentiation and integration in one variable (e.g., change of variables, integration by parts), Taylor series, partial derivatives, double integrals, Jacobians.

Course Description: Continuation of STATS 117, with a focus on probability topics useful for statistics. Sampling distributions of sums, means, variances, and order statistics of random variables. Convolutions, moment generating functions, and limit theorems. Probability distributions useful in statistics (gamma, beta, chi-square, t, multivariate normal).

Homework: Due weekly at 11:00 am on Mondays. Submission is via Gradescope. No late homework is accepted. Your lowest homework grade will be dropped.

Homework problems are graded on a ternary scale (full/half/no credit). Answers that are mostly correct will receive full credit, answers that are approximately half correct will receive half credit, and answers that are mostly incorrect will receive no credit. For a more precise assessment, it is your responsibility to compare your homework to the official solutions.

Exams: The midterm exam will be held in class on Wednesday, July 24. The final exam will be held on Friday, August 16 from 12:15–3:15 pm. The exams are closed-book and no-calculator, but you may use two pages of notes for the midterm and four pages of notes for the final.

Grading: Your grade will be based on one of two grading scales.

- Homework (40%), midterm (20%), final (40%). Letter grade will be determined on a curve that is no more stringent than 90% = A–, 80% = B–, etc. Boundaries between letter grades will be based on natural breakpoints in the grade distribution.
- Effort and citizenship (100%). Letter grade is either A or F, with A indicating exceptional effort and citizenship. This grade is assessed by the teaching staff based on our interactions with you during the quarter.

Your official letter grade in the course will be the *higher* of the two letter grades.

Academic Integrity: All work that you produce in this class must be your own. You may discuss the homework problems with classmates, but your solutions must be in your own words and reflect your own understanding. It is never acceptable to copy a classmate's solution, even if cosmetic changes are made (e.g., changing the names of variables). You may not search for solutions on the Internet or otherwise try to obtain solutions that are not your own.

Students with Documented Disabilities: Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is being made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate

accommodations. The OAE is located at 563 Salvatierra Walk (phone: 723-1066, URL: <http://oae.stanford.edu>).