

ECON 41 – PROBABILITY AND STATISTICS FOR ECONOMISTS
TENTATIVE SYLLABUS
(Summer Session A, 2026)
UCLA Department of Economics
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Office Hours: TBD.

Time and Location: Tuesday and Thursday, 10:45am-12:50pm, Public Affairs 2214.

Class Logistics: Lectures will be taught in-person and streamed on Zoom at the same time. Recordings will be posted within 48 hours. Due to possible technical difficulties, lecture streaming and posting are not guaranteed. All examinations must be **in-person**, no exceptions.

Zoom Links:

- For lecture:
- For office hours:

Course Description: This course is an introduction to the theory of probability and statistics with an emphasis on its use in economics. It will introduce basic statistical concepts such as random variables, probability distributions, estimation, confidence intervals, and hypothesis testing. By the end of the class, students are expected to learn and master these statistical concepts in preparation to apply them in other, more advanced economics or econometrics classes (e.g., Econ 103, 104).

Prerequisites: Math 31A/B or their equivalents. Students are expected to be familiar with basic rules of differentiation and integration.

Tentative Course Outline:

- Week 1: Basic concepts, methods of enumeration, conditional probability, independence
- Week 2: Discrete random variables, mean, variance, correlation, independent random variables, mathematical expectation, special distributions: Bernoulli, Binomial, Poisson
- Week 3: Multivariate discrete distributions. **Midterm (July 9)**

- Week 4: Conditional expectations (TENTATIVE), continuous random variables and distributions, special continuous distributions: Normal, Uniform, and Exponential.
- Week 5: Markov's and Chebyshev's inequalities, sample moments, Law of Large Numbers, Central Limit Theorem
- Week 6: Confidence intervals for the mean, hypothesis testing. **Final (July 30)**

Textbook: *Probability and Statistical Inference*, Ninth Edition by Elliot A. Tanis, Robert V. Hogg, and Dale L. Zimmerman. We do not use the entire book, and students do not need to purchase it.

Homework: There will be homework assignments for each lecture. They are designed to help students study for examinations. They are fully optional in the sense that they will not contribute to the final course grade; however, their careful completion is strongly recommended as preparation for the exams.

Exams: Multiple choice, in-class, and must be taken in-person. This is the department's summer class policy. The midterm will be on **July 9th**, and the final will be on **July 30th**. Here is the non-exhaustive set of policies for the exam:

1. The midterm will cover everything discussed in the first 3 weeks of the term. The final exam will cover everything discussed during the term, including the material covered in the midterm exam.
2. In exams, tables from the appendix of the textbook, when needed, will be provided.
3. The exams will be closed-book.
4. In both exams, you can use a **Canon LS-100TS** calculator (or a simple 4 function one like it). Any other calculator – i.e., scientific or graphing – are forbidden.
5. Cell phones or any other technology are not allowed during the exams.

Evaluation: Your final letter grade will be based on the weighted average of the homework, midterm exam, and the final exam. No other factor will be considered when your letter grades are determined. There will be 2 different weighting options:

- Option 1: Homework – 0%, Midterm – 40%, Final – 60%
- Option 2: Homework – 0%, Midterm – 5%, Final – 95%

Your final grade will be determined by whichever option gives you the highest grade.

Policy on Missed Exams: Exams must be taken at the scheduled time. There will be no make-up exams. Any student who misses an exam will receive a score of zero. The only exception to this policy is if a student has a documented circumstance as detailed in the Economics Department's Common Syllabus ([link](#)).

Center for Accessible Education (CAE): Students needing accommodations based on a disability must contact the CAE which will oversee administering assessments. Any such arrangements with CAE must be communicated to the instructor during the first two weeks of classes. Please see the CAE website.

Academic Dishonesty: Any cases of academic dishonesty will be reported to the Dean's Office of Students. For more details, please refer to the Dean's Office of Students website.

Other Rules: Consult the Common Syllabus, which can be found at:
<https://economics.ucla.edu/undergraduate/common-syllabus/>