MATH 4740: Theory of Probability
Spring 2025

Instructor: Tony Shaheen
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Office Hours: Monday and Wednesday 11am - 12pm; location to be determined.

Course Website: Follow the link from http://www.calstatela.edu/research/ashahee/
Lectures: Monday and Wednesday, 12:15pm – 1:30pm in SH 258.

Textbook: There is no required textbook for the course.   If you want to get one here are some suggestions: (1) A First Course in Probability by Sheldon Ross, (2) Fundamentals of Probability by Saeed Ghahramani.

Calculators: Please have a calculator for the exams that is not your phone.

Other items you could consider buying (optional): some coins to flip, a deck of cards, some dice to roll.

Prerequisite: Math 2130.   Recommended: Math 2450.

Description: We will learn about probability spaces, counting techniques, random variables, expected value, variance, binomial distributions, the normal distribution, other distributions.

Student learning outcomes: Students will learn the definitions and theorems from probability theory. They will be able to compute various probabilities and related questions as presented in class and homework.

Homework: Homework will be assigned, but not collected.   The homework problems and solutions will be posted on the course website.

Grading: Your grade will be based on two tests.   Test 1 covers roughly the first half of the class and test 2 covers roughly the second half of the class.   There is also an optional cumulative final exam that can be used to replace one or both of your test grades.

I will use the best of the following systems for your grade:

> Two test system: Test 1 = 50%, Test 2 = 50%
> Drop one test system: Better of test 1 / test 2 = 50%, Final = 50%
> Drop both tests system: Final = 100%

When I hand back test 2, I will let you know the grade you have so far based on the two test system. You can then decide if you want to take the final exam or not.   The final exam will be a cumulative exam that covers both test 1 and test 2 material.

Tentative Exam Dates: Note that the final exam time/day is scheduled by the school, and it may change.

<u>Test 1</u>: Wednesday, March 19, in class
<u>Test 2</u>: Wednesday, April 30, in class
<u>Final:</u> Monday, May 12, 12:00pm-2:00pm

ADA statement: Reasonable accommodation will be provided to any student who is registered with the Office of Students with Disabilities and requests needed accommodation.   Let me know if you take your tests with OSD.

Academic honesty statement: Students are expected to do their own work. Copying the work of others, cheating on exams, and similar violations will be reported to the University Discipline Officer, who has the authority to take disciplinary actions against students who violate the standards of academic honesty.

Student responsibilities: Students are responsible for being aware of all announcements that are made in class, such as changes in exam dates, due dates of homework and papers, and cancellation of class due to instructor's absence. Students are responsible for announcements made on days that they are absent.

Students must check their CSULA email account regularly for information from the instructor and the Department. Failure to do so may result in missed deadlines or other consequences that might adversely affect students. Note that you can forward this email account to any other account of your choosing.