

DEPARTMENT OF MATHEMATICS
California State University, Bakersfield
MATH 340 – Probability Theory

Instructor: Charles Lam

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Class times: MTR 6-7:25pm (SCI 3-212)

Office Hours: MR 2-4, T 3-4 or drop by when I am in.

Course Description: The main focus of this course is Probability Theory.

Course Objectives: At the end of the course, students will learn about

- (1) Sample spaces and events.
- (2) Permutations and combinations.
- (3) Conditional probability; independence; Bayes theorem.
- (4) Discrete and continuous random variables.
- (5) Bivariate, multivariate, marginal, and conditional distributions.
- (6) Functions of random variables; expected value, moments, variance, covariance, and correlation.
- (7) Distribution theory including Bernoulli, binomial, hypergeometric, Poisson, uniform, normal, exponential, gamma, and beta distributions.
- (8) Central limit theorem.

Text: Mathematical Statistics with Applications, 7th ed., by Wackerly, Mendenhall, and Scheaffer.

Sections covered: Most of Chapters 2-6.

Web page: The web page for the course is at <http://www.csub.edu/~clam/math430f12.html>

Student Activity: Student Activity are conducted on every Tuesday. Attendance is required. You are required to work in groups of 3-5 on assigned problems and hand in the reports **individually** at the end of Student Activity. One lab will be graded at random from each group, and every group member will be assigned the same grade.

Homework: Weekly homework will be given, you will have one week to finish homework.

Grading: In addition to student activity and homework, there will be two tests, and a final exam (cumulative). A pass (50%) in the final exam is required to obtain a final grade of D- or better. A 60% in the final exam is required to obtain a final grade of C- or better.

Student Activity	10%
Homework	20%
Test 1	20%
Test 2	20%
Final Exam	30%

Test Dates:

- Test 1: October 15, Monday (tentative)
- Test 2: November 15, Thursday (tentative)
- Final Exam: November 26, Monday, 5-7:30pm

Remarks:

- There will be no make-up exams or tests. If you know in advance that you are going to miss an exam, please make your arrangements with me at least one week ahead.
- Please hand in labs and homework on time. Late labs and homework will be accepted up to the beginning of next class for 50% of credit.

Academic Dishonesty:

You are encouraged to work with your classmates in labs and homework. However, YOU ARE REQUIRED TO HAND IN WORK WRITTEN BY YOURSELF. A rule of thumb is to destroy any evidence of discussion before writing up the solutions yourself.

If you collaborated with anyone, ACKNOWLEDGE COLLABORATORS. Please also note that, ACKNOWLEDGING YOUR FRIENDS ON THE CONTRIBUTION DOES NOT MEAN YOU HAVE THE RIGHT TO COPY OTHERS' WORK. YOU MUST WRITE THE SOLUTIONS IN YOUR OWN WORDS.

If you are caught cheating, the policy for this class is -10% to the final grade on the first offense, -20% for the second, and -50% thereafter.