Stat 345-001 Syllabus

STAT 345-001: ELEMENTS OF MATHEMATICAL STATISTICS AND PROBABILITY

INSTRUCTOR: Dr. Li Li llis@unm.edu
CLASS: **TTr** 12:30pm-1:45pm, Dane Smith Hall 226
OFFICE HOURS: **SMLC 314, TTr 11:00am-12:00am or by appointment**
COURSE WEBPAGE: http://math.unm.edu/~lil/
*PREREQUISITES***:** MATH 181 or MATH 163.

TEXT: *Applied Statistics and Probability for Engineers, 7th Edition* by Douglas C. Montgomery and George C. Runger, John Wiley and Sons, Inc. Versions 4-6 will also do. We have internal e-book access to the textbook through blackboard at price $69.5. Deadline for add or opt out the e-book is 9/2/2019. You will have free access using the links in your Blackboard Learn during the add/drop period.

OBJECTIVES AND TOPICS:

This course provides an introduction to probability theory and statistical inference. We will cover most of Chapters 2-5, and portions of Chapters 6-9. Chapters 2-5 concentrate on probability, including combinatorics, Bayes' theorem, probability distributions, expectation, variance and correlation. Chapters 6-9 introduce point estimation, confidence intervals, and hypothesis testing. This course has been designed for computer science and engineering students; however, it is broad enough for students from outside these disciplines.

EXAMS (60 points total):

Three midterm exams, each count for 20 points of the total score, and no final exam.

Exam I: September 24th, in class. One sheet of note is allowed.
Exam II: October 31th, in class. One sheet of note is allowed.
Exam III: December 5th, in class. One sheet of note is allowed.

These exams will involve a mix of mechanical skills and conceptual reasoning. The best possible preparation for the exams is regular attendance and completion of assigned homework. Please note that **makeup exams are given at the discretion of the instructor and, in any case, only for verified medical or other emergency, which must be documented. The instructor must be contacted before the test is given.**

HOMEWORK (35 points total):

Homework will be assigned through email and collected about every one and half weeks. **Each homework assignment has one week after receiving graded homework to correct the wrong and receive 60% of the missed credit.**

Feel free to discuss with other students, although each student must turn in a copy of each assignment. Group discussions are not only great ways to make lasting friendships, they are valuable for retention and understanding of the material, and working well in a group is a vital part of being a professional. However, make sure you understand the material, as 60% of your overall grade comes from your exam scores.

Quizzes (5 points total): pop quizzes will be given.

GRADES: A+: 98-100, A: 93-97.99, A-: 90-92.99, B+: 87-89.99, B: 83-86.99, B-: 80:82.99, C+: 77-79.99, C: 73-76.99, C-:70-72.99, D+: 67-69.99, D: 63-66.99, D-: 60-62.99, F: <60

Calculator and R:

A calculator such as TI 83, TI 84 (or other types with basic probability and statistical functions such as mean, standard deviation, etc.) is required in this class.

Accessibility:

We will accommodate students with documented disabilities, through the UNM Accessibility Resource Center (ARC). During the first two weeks of the semester, those students should inform the instructor of their particular needs.

Academic misconduct: During exams, you are not allowed to copy off another student, consult reference materials (beyond the one sheet of allowed notes), or use a cell phone or any device capable of messaging, texting, or accessing the internet. Any of these actions will be considered cheating. On homework assignments, you are not allowed to copy and paste text or code from another student. Doing so will be considered plagiarism.