STAT 420: Probability and Mathematical Statistics I
Fall 2016

Instructor: Wen Zhou (Email: riczw@stat.colostate.edu), 208 Statistics Building
TA: Mihyun Lucy Kim (Email: mihyun.kim@colostate.edu), 007 Statistics Building

Meeting Place and Time: MWF 2:00-2:50pm, 201 Glover Building (08/22-12/11)
Office Hours: 2:00-3:00pm Tue. and Thur. or by appointment.

In-Class Midterm Exams: 09/30 (Friday) and 11/04 (Friday)
Final Exam: Tuesday, 12/13, 4:10-6:10pm

Objectives: This course will introduce students to fundamental probability; random variables of both discrete and continuous types, distribution functions, expectations; multivariate random vectors, joint and conditional distributions; functions of random variables, transformations; sampling distributions, central limit theorems. The goal of the course is to provide the necessary probability background required for a course in mathematical statistics (STAT 430).

Prerequisites: MATH 255 or MATH 261 or equivalent courses; solid knowledge on calculus. Consent of instructor is strongly recommended for all students without background in calculus.

Course Materials and Computing:

Required textbook: Mathematical Statistics with Applications, 7th edition, by Wackerly, Mendenhall, and Scheaffer. We will cover chapters 2-7.

Class web page: All homework assignments, handouts, and other information will be available on the course web page on **CANVAS**.

Software: Some homework assignments will require the use of a programming language; I recommend R because it's free and widely used. You can download R at http://cran.r-project.org.

Expectations: Students are expected to spend at least two hours outside of instructional time on reading, homework, and exam preparation for each contact hour.

Attendance: Attendance at each class is required. I will not assign grades based on your attendance.

Course Work:

Homework: Homework is assigned on Friday and due on the following Friday. You can give it to me in class, or in my office up to 4:45pm on that day for full credit.

- Late homework: No credit unless a prior permission is granted.
- All homework assignment will be worth equal weight.

- To receive credit on homework you must: *show your work neatly, clearly label each problem, circle your final answer if applicable, staple the entire assignment together in the correct order, with your full name printed on top of each page.* Any homework violating these rules will receive a grade of zero for that entire homework assignment.

- Students are encouraged to work together and help each other on the homework problems, however, the *write-up of the solutions must be done independently.*

- Your first point of contact for questions about the grading of the homework is the TA (Mihyun Lucy Kim, mihyun.kim@colostate.edu). If you have a question about how an exam was graded, please see me directly.

Exams: There will be two midterms and a comprehensive final exam. Exams are in class, entirely closed-book and closed-notes.

- Exam conflicts: Requires prior permission *and* prior testing only. *Under no circumstances* (aside from University requirements) will changes to the final exam time be permitted; plan accordingly.

Grading: Homework (20%), first midterm (25%), second midterm (25%), and final exam (30%).

1. The course is not graded on a curve. The grading scale is:

   A=90+; A-= 87-89; B+= 85-87; B=80-84; B-=77-79;
   C+ =74-76; C=70-73; C-=67-69; D=60-66; F=0-59.

2. Any grading dispute must be submitted in writing to me within one week after the work is returned. No changes will be made after this deadline.

Academic honesty: It is important that your course work represents only your ideas. I encourage discussion of homework in broad, conceptual terms where one student is trying to educate another without giving away the answer. Copying solutions or computing code from other students or other sources is plagiarism. At a minimum, all students involved will receive a 0 on the assignment in question for any type of academic dishonesty.

Special accommodations: Resources for Disabled Students: Support and services are offered to student with functional limitations due to visual, hearing, learning, or mobility disabilities as well as to students who have specific chronic health conditions. See the Resources for Disabled Students web page for more information (rds.colostate.edu). If you need specific accommodations due to a disability, please meet with me outside of class to discuss your needs as early in the semester as possible. In accordance with RDS procedures, accomodations must be arranged in advance–no retroactive remedies are allowed.

Note: The instructor reserves the right to make any changes he considers academically advisable. It is your responsibility to attend classes and keep track of the proceedings.