

STA 4321/5323: Introduction to Mathematical Statistics

Course description: This course covers various topics including: combinatorial analysis, random variables (discrete and continuous), probability distributions, independence, conditional probability, correlation, etc.

Prerequisite courses: MAC 2311, 2312, 2313. You need to be familiar with the theory and applications in Calculus I, II, III.

Lecture: 9:30–10:45 AM, Tuesday & Thursday, OSB 0110

Instructor: Lifeng Lin

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Office: OSB 201B

Office Hour: 10:45–11:30 AM, Tuesday & Thursday, or by appointment

Teaching Assistant: Yue Mu

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TA Office Hour: 10–11 AM, Monday, Dirac 443

Class Website: <https://fsu.instructure.com/>.

Textbook (required): *A First Course in Probability* (9th Edition), by Sheldon Ross, Pearson Education, 2014. Most of the homework problems will be from this book.

Textbook (optional): *Probability and Statistics with Applications: A Problem Solving Text*, by Leonard A. Asimow and Mark M. Maxwell, ACTEX Publications, 2010.

Homework: There will be around eight homework assignments. Policy on homework: Unless otherwise directed, you may discuss homework problems with other students according to the following policy: No student should ask for or offer assistance from any other student until that student has made a serious effort to solve the problem. After such an effort has been made, then students may seek help from the instructor, fellow students or others. Appropriate cite all sources that provided significant aid in your solution. All work must be written up individually. Late homework will not be accepted unless prior arrangement has been made with the instructor.

Exams: There will be two midterm exams and a final exam. The midterms will be based on the material covered by the time of the exams. The final exam will be cumulative. You will be permitted to bring a sheet of notes to the exams. You may need a calculator for some problems. All midterms are held in the classroom where the course normally meets. Tentative schedule for the exams are in the following.

- Midterm 1: 9:30–10:45 AM, Tuesday, February 12
- Midterm 2: 9:30–10:45 AM, Thursday, March 28
- Final: 10:00 AM–12:00 PM, Tuesday, April 30

There will be no makeup exams. If you must miss an exam, notify the instructor as early as possible.

In-class discussion: There will be in-class group discussion, whether announced in advance or not. The class will be divided into small groups. One or two problems will be given in class and each group may need to turn in their solution after discussion. The quizzes may be graded. If graded, the performance on quizzes will be included in the homework portion of the grade; each graded quiz will be counted as around 1/10 of a homework assignment.

Final grade: It will be determined by a weighted average of the following items: (1) midterms 2 × 25%, (2) final exam 30%, (3) homework 20%. The overall percentage will correspond to grades as 90–100 = A or A-, 80–89 = B- to B+, 70–79 = C- to C+, 60–69 = D- to D+, < 60 = F. Final grades may be adjusted.

Course Policies

- **Classroom policies:** The classroom environment is an important factor for effective learning. In order to not distract other students' attention please follow these classroom policies. The first one of these is the university policy. Remember that no food or drinks are allowed in the classroom. Turn off all audible alarms (cell phones, pagers, calculators, watches etc.) Do not use cell phones in the class. Come to the class on time. Opening and closing the classroom door in the middle of a class cause distraction to the students and the teacher. Do not talk to other students without permission while the professor is teaching. More than one conversation creates noise and makes it difficult for the students to pay attention to the lecture.
- **Attendance:** You are required to attend all classes. The class activities will help you assimilate the lessons more easily, giving you an opportunity for active learning. Do not let this opportunity slip away. Any foreseen absence must be cleared with the instructor. If the absence is due to emergencies, it is the student's responsibility to notify the instructor at the earliest opportunity of the emergency.
- **Collecting returned homework/exam:** It is the student's responsibility to retrieve his or her homework/exam whenever they are returned and to check grades on the class website. If you notice any mistake in recording grades, please inform the instructor about it as soon as possible but no later than one week from grades being posted online.
- **Homework re-grade:** You have one week to request a re-grade of a homework from the date on which the graded homework is available to the students of the class. Submit a written request detailing the nature of the grading error to the instructor along with the relevant homework.
- **Contacting the instructor or TA outside the class:** You are strongly encouraged to come to the instructor or TA during their office hours. If your schedule conflicts with the office hours, you can make an appointment. You may ask the instructor brief questions by e-mail, but you may be asked to come to office hours if the instructor thinks that the questions are better answered in person. When you send e-mails remember the following: always send e-mails from your FSU accounts. The e-mails from non-FSU accounts may not reach me due to filters. Always write your full name at the end of each e-mail message you send.

- Academic honor policy: The Florida State University Academic Honor Policy outlines the University expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "... be honest and truthful and ... [to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy)
- Students with disabilities: Students with disabilities in need of academic accommodation should: 1. Register with and provide documentation to the Student Disability Resource Center; 2. Bring a letter to the instructor indicating the type of accommodation needed. This should be done during the first week of class. See <https://dos.fsu.edu/sdrc/> for more information.