STA 4321 **Introduction to Probability** **Fall, 2023**
STA 5325 **Fundamentals of Probability**

Course Information

Time: MWF 8:30 – 9:20 a.m. (Period 2) **Location:** TURL 011

Instructor: Sohom Bhattacharya

Office: 202 Griffin Floyd Hall **E-mail:** bhattacharya.s@ufl.edu

Office Hours: (might change occasionally) Mon 10-12

Teaching Assistant: Yaozhi Yang

Office: **E-mail:** yangyaozhi@ufl.edu

Office Hours: TBD

Objective

The sequence of courses STA 4321-4322 (rep. 5325-5328) provides a formal and systematic introduction to mathematical statistics for students who have passed three semesters of standard undergraduate level calculus. STA 4321/5325 introduces the background in probability that is necessary to understand the classical statistical theory introduced in STA 4322/5328.

Prerequisite

MAC 2313 (or equivalent third semester calculus course). A well-prepared student should have taken an introductory statistics course, such as STA 2023 or STA 3032.

Course Contents

- Basic formal elements of probability
- Discrete and continuous random variables
- Multivariate distributions
- Distributions of functions of random variables
- Fundamental limit theorems

Text

- Wackerly, Mendenhall, and Scheaffer, *Mathematical Statistics with Applications* (7th ed), Duxbury Press (Thomson Brooks/Cole Publishing), 2008.

Lectures will cover (roughly) chapters 1-7. Note that the exams will be based on material actually taught in lectures. The textbook is helpful and suggested additional exercises will be assigned from it, but is not strictly mandatory.

Course Website

Canvas course page. Please check the canvas site regularly. Most course documents and important information, including homework exercises and solutions, sample exams and special announcements, will be posted in canvas.

Grades

- There will be three in-class exams (25% each) and approximately bi-weekly quizzes, of which three will be dropped (counting for 25% in total).
- The usual 10 point scale (90% above for an A, 86-89% for an A-, 81-85% for a B+, 80% for a B, ...) will be used for grading. Refer to the tentative grade cut-off pdf uploaded. **All grades are final and non-negotiable.**

Exams

- Three in-class (**non-cumulative**) exams are tentatively scheduled:

  Exam 1: **Wednesday, Sept 20**

  Exam 2: **Wednesday, Oct 25**

  Exam 3: **Wednesday, Dec 6**

- You will be permitted to bring one 8.5 by 11 inches sheet of paper with formulas or notes written on both sides to each exam.
- **Calculator:** A non-graphing calculator might be used for the exams and quizzes however you will not be penalized for not simplifying terms like $\binom{20}{4}/\binom{30}{6}$

Homework Exercises and Quizzes

- There will be approximately bi-weekly quizzes, typically scheduled on Friday. Each will take place during the final 10 to 15 minutes of class time. No books, notes or other references may be used during a quiz. All quizzes have equal weight for grading, but three of your (lowest) quiz scores will be dropped. No make-up quizzes will be offered.
- You are encouraged to discuss homework problems with other students; however, you must answer on your own during the quizzes. Solutions to the homework exercises will be posted after the quizzes.
- The instructor and Teaching Assistant make every effort to ensure that grades assigned are scrupulously fair and reflect the quality of the work concerned. Due to this process of consultation and the use of uniform grading criteria, the TA has complete authority in all actions that he undertakes regarding the quizzes, and the instructor is unlikely to rescind any of his decisions.

Suggested Additional Exercises

In order to master the course material it is essential that you work as many exercises as possible. For this reason, along with the weekly homework exercises, additional suggested exercises from the textbook will also be posted on the course web-page on a regular basis. You are not expected to submit answers to these suggested exercises, but you should solve all of them to keep up with the pace of the course and thoroughly learn the material. This will also help you prepare for the exams.

Lecture Attendance

Classroom lecture attendance is fully expected, even if not strictly enforced. You are responsible for learning all material presented during lecture, and any topic covered is a potential exam topic (unless otherwise stated).

Reasonable Accommodations

To request classroom accommodation, please be certain that you have made all necessary arrangements with the Dean of Students Office, and obtain from them documentation to submit to the instructor at the time of your request. A request must be made to the instructor at least one week in advance of the date for which the accommodation is requested. This course information and policies sheet can be made available in alternative formats to accommodate print-related disabilities. Contact the instructor for more information.

Academic Integrity

Please familiarize yourself with the Student Honor Code and Academic Honesty Guidelines outlined in your University of Florida Student Guide at `http://www.dso.ufl.edu/sccr/honorcode.php`.