

Stat 7201: Probability

Course Syllabus, Fall 2018

Instructor: David Sivakoff

Email address: dsivakoff@stat.osu.edu

Office: Cockins Hall 404A

Office hours: M 11:30am–12:30pm, T 1–2pm and by appointment (at least 48 hours in advance).

Course time and location: MWF 10:20–11:15am in Derby Hall 049.

Course webpage: On Carmen: carmen.osu.edu

Textbook: *A Probability Path* by Sidney Resnick, Birkhäuser, 2005.

Content

This is a measure-theoretic probability course. The focus will be on developing a deep understanding of the modern mathematical theory of probability, and there will be a strong emphasis on writing clear proofs. Specific topics include: probability spaces, random variables, expectation (integration), modes of convergence, and limit theorems (LLN, CLT). For more details, refer to the schedule posted on the Carmen webpage.

Homework and Quizzes (20%)

Homework assignments will be posted on the course webpage most weeks, and will *not* be collected. Instead, there will be a quiz approximately every two weeks, which will be based on the previous homework assignments. Quizzes are closed book and closed notes. Quiz dates are marked on the course schedule.

Midterm and Final Exams (35% midterm, 45% final exam)

There will be one midterm exam and one final exam. Both exams are in-class and closed book. The midterm exam will be on Wednesday, October 24. The final exam will be comprehensive and is on Tuesday, December 11 at 10am to 11:45am.

Missed Work

Please notify me as soon as possible if you will miss any deadlines or exams due to illness or family emergency. Also, if you know in advance that you will miss an exam due to religious observances or a varsity sport, you must let me know as soon as possible, and at least one week before the exam. Attendance in class is required, and you are responsible for making up for the material covered in class during any absence.

Academic Misconduct

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

You are encouraged to discuss the homework assignments with your classmates and both offer and receive advice. However, the final submission *must be your own work*. For the in-class midterm exam and final exam, you must work completely independently.

Disability Services

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>.

Miscellany

- Learning this material, like anything else, takes time. Allow yourself this time by trying to do a little bit of reading from the textbook and a little bit of problem-solving each day, rather than waiting until a deadline is near. I will not have time to cover everything written in the book, so it is important that you read the text to fill in the gaps.
- Check your email and the course website frequently. I will use the website to post homework assignments, information about the exams, rescheduled office hours, etc.
- Other references you might like to look at:
 - *Probability: Theory and Examples* by Rick Durrett. Contains lots of great examples, and good balance of probabilistic intuition and theory, though sometimes brushes details under the rug. An up-to-date version is kept on his website: <https://services.math.duke.edu/~rtd/>
 - *Probability and Measure* by Patrick Billingsley. A very thorough treatment of graduate-level probability.
- Please feel free to approach me with any questions or concerns - my primary goal is to help you learn the material. I hope you enjoy the class!