Math 458/558   Stochastic Processes   Winter 2019

Instructor   Amites Sarkar

Text   Probability, an Introduction (2nd edition)
                        Grimmett and Welsh

Syllabus

We will cover Chapter 9 (**branching processes**), Chapter 10 (**random walks**) and Chapter 12 (**Markov chains**), before returning to cover as much of Chapter 11 as time allows.

Course objectives

The successful student will know and understand the statements and proofs of the main theorems in the course (a list will be provided later), and be able to apply these theorems to solve problems in probability.

Relation to overall program goals

Among other things, this course will (i) enhance your problem-solving skills; (ii) help you recognize that a problem can have different useful representations (graphical, numerical, or symbolic); (iii) increase your appreciation of the role of mathematics in the sciences and the real world; (iv) inform you about the historical context of the area of mathematics studied.

Final

Wednesday 20 March 8–10 am. This will be a closed book exam.

Grading

I will base the grade on two **homework** assignments (worth 25% each), and the **final**, worth 50%. For the graduate students in Math 558, there will be additional homework questions and a separate exam, with a greater emphasis on proofs over computation throughout. I'll talk more about this in class.

Office hours

My office hours are 2–2:50 on Mondays, Tuesdays, Thursdays and Fridays, in 216 Bond Hall. My phone number is 650 7569 and my e-mail is amites.sarkar@wwu.edu