STAT 482 Random Processes FALL 2024

COURSE SCHEDULE

N	Date	Topic	Section
1	Tu, Aug. 27	Introduction	
2	Th, Aug. 29	Discrete Markov chains, Chapman – Kolmogorov equations, classification of states, limiting probabilities	1.1-1.5
3	Tu, Sep. 3	Computations in R	1.6
4	Th, Sep. 5	Simulations in R	1.7
5	Tu, Sep. 10	Applications of Markov chains	1.8
6	Th, Sep. 12	Random walk, Simulations in R	2.1-2.3
7	Tu, Sep. 17	**Homework 1 due**, applications of random walk	2.4
8	Th, Sep. 19	Poisson process	3.1
9	Tu, Sep. 24	Poisson process	3.1
10	Th, Sep. 26	Simulations in R, applications of Poisson process	3.2, 3.3
11	Tu, Oct. 1	Poisson process	3.3
	Th, Oct. 3	**Review for first midterm exam**	
	Tu, Oct. 8	**Homework 2 due, first midterm exam**	
12	Th, Oct. 10	Nonhomogeneous Poisson Process	4.1, 4.2
13	Tu, Oct. 15	Nonhomogeneous Poisson Process	4.2, 4.3
14	Th, Oct. 17	Compound Poisson process	5.1, 5.2
15	Tu, Oct. 22	**Homework 3 due**, conditional Poisson process	6.1, 6.2
16	Th, Oct. 24	Conditional Poisson process	6.3
17	Tu, Oct. 29	Birth-and-death process	7.1-7.3
18	Th, Oct. 31	Branching process	8.1-8.3
	Tu, Nov. 5	**Review for second midterm exam**	
	Th, Nov. 7	**Homework 4 due, second midterm exam**	
19	Tu, Nov. 12	Branching process	8.1-8.3
20	Th, Nov. 14	Brownian motion	9.1 9.2
21	Tu, Nov. 19	Brownian motion	9.1 9.2
22	Th, Nov. 21	Brownian motion	9.3, 9.4
	Tu, Nov. 26	**Thanksgiving Break – No Class**	
	Th, Nov. 28	**Thanksgiving Break – No Class**	
	Tu, Dec. 3	PowerPoint presentations, session I	
	Th, Dec. 5	PowerPoint presentations, session II	
	Tu, Dec. 10	PowerPoint presentations, session III, **Homework 5 due, Review for final examination**	

The final examination will be on Tuesday, December 17, 12:30-2:30PM, in LA5-169.