

This is a tentative schedule, subject to change.

Lecture	Date	Topic	Due
1	Tuesday, April 1, 14	Markov chains: forward and backward equations	
2	Thursday, April 3, 14	Markov chains with rewards	
3	Tuesday, April 8, 14	Hidden Markov models and filtering	
4	Thursday, April 10, 14	Modeling with SMPs, phase-type distributions	Hwk 1
5	Tuesday, April 15, 14	MDPs, MDP structural properties	
6	Thursday, April 17, 14	Markov chain limit theorems and renewal processes	Hwk 2
7	Tuesday, April 22, 14	Renewal processes and limit theorems	
8	Thursday, April 24, 14	Renewal equation	Hwk 3
9	Tuesday, April 29, 14	Renewal processes: inspection paradox	
10	Thursday, May 1, 14	Filtrations; martingale definition	Hwk 4
11	Tuesday, May 6, 14	Optional stopping and Markov random walks	
12	Thursday, May 8, 14	Wald's Equation	Hwk 5
13	Tuesday, May 13, 14	Sequential hypothesis testing	
14	Thursday, May 15, 14	Jensen's inequality, Chernoff bound, and large deviations	Hwk 6
15	Tuesday, May 20, 14	Confidence intervals: MLE, Bayesian, MCMC	
16	Thursday, May 22, 14	Brownian motion: properties, definitions, and Donsker's thm.	Hwk 7
17	Tuesday, May 27, 14	Brownian motion properties and SDE definition	
18	Thursday, May 29, 14	Common SDEs and simulating them	Hwk 8
19	Tuesday, June 3, 14	SDEs and PDEs	
20	Thursday, June 5, 14	Slack	
	Tuesday, June 10, 14		Hwk 9