DATE	HW DUE	SECTION & TOPIC
M 1.11		1.1-1.2: Introduction to Markov chains
T 1.12		1.2: Basic examples of Markov chains
W 1.13		1.3-1.4: Operations with transition matrices
R 1.14		Activity: practice problems with Markov chains
M 1.18		*No class - Martin Luther King Day*
T 1.19		1.5: Recurrence and transience
W 1.20		1.5: Properties of recurrent states
R 1.21		1.6: Absorption probabilities
M 1.25		Activity: more practice problems with Markov chains
T 1.26		Preparation for first group presentation
W 1.27	1-13	Preparation for first group presentation
R 1.28		Preparation for first group presentation
M 2.1		**First group presentation: Markov chains**
T 2.2		2.1-2.2: Introduction to martingales
W 2.3		2.2-2.3: Conditional expectation
R 2.4		2.4: Martingales and the Optional Stopping Theorem
M 2.8		2.5: Random walk on $\mathbb{Z}$
T 2.9		2.5: Random walk on $\mathbb{Z}$
W 2.10		Activity: random walk in higher dimensions
R 2.11		Review
M 2.15	14-21	**EXAM 1:** covers Chapters 1 and 2
T 2.16		3.1: Elementary properties of stationary distributions
W 2.17		3.2: Cesáro convergence
R 2.18		3.2: Mean return times
M 2.22		3.2: Null recurrent and positive recurrent states
T 2.23		3.2-3.3: Existence and uniqueness of stationary distributions
W 2.24		3.3: Convergence properties and periodicity
R 2.25	22-28	3.4: Calculations of stationary distributions I
M 2.29		3.4: Calculations of stationary distributions II
T 3.1		Preparation for second group presentation
W 3.2		Preparation for second group presentation
R 3.3		**Second group presentation: Markov chains**
M 3.7 to R 3.10		*No class - Spring Break*
M 3.14		Review
T 3.15		Applications of probability to bracketology
W 3.16	29-40	**EXAM 2:** covers Chapter 3
R 3.17		Activity: review of eigenvalues and eigenvectors

DATE	HW DUE	SECTION & TOPIC
M 3.21		4.1-4.2: Introduction to CTMCs
T 3.22		4.2: Q-matrices and matrix exponentiation
W 3.23		4.2: Computations with finite state space CTMCs
R 3.24		*No class - mid-semester recess*
M 3.28		Activity: CTMCs with finite state space
T 3.29		4.3: Jump processes
W 3.30		4.4: Class structure of CTMCs
R 3.31		5.1-5.2: Birth-death chains
M 4.4	41-45	5.2-5.4: Branching chains and processes
T 4.5		5.5-5.6: Queuing models
W 4.6		6.1-6.2: Introduction to Brownian motion
R 4.7		Preparation for third group presentation
M 4.11	46-57	**Third group presentation:** 6.3: martingales associated to BM
T 4.12		**Third group presentation:** 6.4-6.5: Gaussian processes
W 4.13		**Third group presentation:** 6.6-6.7: zero sets of BM
R 4.14		Review
M 4.18		**EXAM 3:** covers Chapters 4, 5 and 6
T 4.19	58-71	
W 4.20		Preparation for final presentations
R 4.21		
M 4.25 to R 4.28		**Final presentations**