DATE	DUE	SECTION & TOPIC
M 1.9		1.1: Introduction to Markov chains
T 1.10		1.2: Basic examples of Markov chains
W 1.11		1.3-1.4: Operations with transition matrices
R 1.12		Activity 1: practice problems with Markov chains
M 1.16		*No class - Martin Luther King Day*
T 1.17		1.5: Stationary distributions
W 1.18	1-10	1.5: More on stationary distributions
R 1.19	Act 1	1.6: Class structure and periodicity
M 1.23		1.7: Recurrence and transience
T 1.24		1.7: State space decomposition
W 1.25	11-21	1.7: Absorption probabilities
R 1.26		Activity 2: more practice problems with Markov chains
M 1.30		Preparation for first group presentation
T 1.31		Preparation for first group presentation
W 2.1	22-32	Preparation for first group presentation
R 2.2	Act 2	**Group presentations on Markov chains**
M 2.6		**EXAM 1 - covers Sections 1.1-1.7**
T 2.7		1.8: Mean return times; positive and null recurrence
W 2.8		*No class - Professor absent*
R 2.9		*No class - Professor absent*
M 2.13	33-39	1.8: Existence and uniqueness of stationary distributions
T 2.14		1.9-1.10: Proof of the FTMC
W 2.15		2.1: Introducing martingales
R 2.16	40-50	2.2: Filtrations and strategies
M 2.20		2.3: Conditional expectation with respect to a σ-algebra
T 2.21		2.4: Martingales and optional stopping
W 2.22		2.5: Random walk on $\mathbb{Z}$
R 2.23	51-57	2.5: Random walk on $\mathbb{Z}$
M 2.27		Activity 3: random walk in higher dimensions
T 2.28		2.6: Introduction to birth and death chains
W 3.1		2.6: More on birth and death chains
R 3.2	58-68	Activity 4: review of eigenvalues and eigenvectors
M 3.6 to R 3.9		*No class - Spring Break*
M 3.13	Act 3	Review for Exam 2
T 3.14		**EXAM 2 - covers Sections 1.8-1.10 and Chapter 2**

DATE	DUE	SECTION & TOPIC
W 3.15	69-74	3.1-3.2: Introduction to CTMCs
R 3.16	Act 4	3.2: Q-matrices and matrix exponentiation
M 3.20		3.2: Computations with finite state space CTMCs
T 3.21		Activity 5: CTMCs with finite state space
W 3.22		3.3: Jump processes
R 3.23	75-79	3.4: Class structure of CTMCs
M 3.27	Act 5	3.4: Stationary distributions of CTMCs
T 3.28		3.5: Birth and death CTMCs
W 3.29		3.6-3.7: Branching processes and queues
R 3.30	80-88	4.1-4.2: Introduction to Brownian motion
M 4.3		Preparation for group lectures
T 4.4	89-96	Preparation for group lectures
W 4.5		*No class - Mid-semester Recess*
R 4.6		*No class - Mid-semester Recess*
M 4.10		**Group lectures:** 4.3: Martingales associated to BM
T 4.11		**Group lectures:** 4.4: Gaussian processes
W 4.12		4.5-4.6: Symmetries and zero sets of BM
R 4.13	97-107	**Group lectures:** 4.7: BM in higher dimensions
M 4.17		Preparation for final presentations
T 4.18	108-121	Preparation for final presentations
W 4.19		Preparation for final presentations
R 4.20		**EXAM 3 - covers Chapters 3 & 4**
M 4.24		Preparation for final presentations
T 4.25		**Final presentations**
W 4.26		**Final presentations**
R 4.27		**Final presentations**
W 5.3		**Final presentation(s)** (if necessary) - 2 PM