

**MATH 154 - PROBABILITY THEORY, SPRING 2018**  
**TENTATIVE SCHEDULE**

Day	Topic
M, Jan 22	Administrivia, introduction
W, Jan 24	<b>HW 1 out</b> Events and probability spaces (Chapter 1)
F, Jan 26	Events and probability spaces (Chapter 1)
M, Jan 29	Product spaces, worked examples (1.6, 1.7)
W, Jan 31	<b>HW 1 due, HW 2 out</b> Random variables and the law of averages (2.1, 2.2)
F, Feb 2	Discrete and continuous random variables (2.3)
M, Feb 5	Examples, Joint distributions, Monte-Carlo simulations (2.4-2.6)
W, Feb 7	<b>HW 2 due, HW 3 out</b> Probability mass functions, independence (Chapter 3)
F, Feb 9	Expectation of a random variable (Chapter 3)
M, Feb 12	Indicators, some examples (Chapter 3)
W, Feb 14	<b>HW 3 due, HW 4 out</b> Joint and conditional distributions (Chapter 3)
F, Feb 16	Random walks (Chapter 3)
M, Feb 19	<b>President's Day: no class.</b>
W, Feb 21	<b>HW 5 out</b> Random walks (3.9, 3.10)
F, Feb 23	<b>HW 4 due</b> Random walks (3.9, 3.10)
M, Feb 26	Continuous r.v.: independence and expectation (Chapter 4)
W, Feb 28	<b>HW 5 due, HW 6 out</b> Continuous r.v.: independence and expectation (Chapter 4)
F, Mar 2	Continuous random variables: examples (Chapter 4)
M, Mar 5	<b>Midterm out (due March 6)</b> Continuous r.v.: joint distributions (Chapter 4)
W, Mar 7	<b>HW 7 out</b> Continuous r.v.: conditional distributions (Chapter 4)
F, Mar 9	<b>HW 6 due</b> Functions and sums of continuous r.v. (Chapter 4)
Mar 12-16	<b>Spring break: no class.</b>
M, Mar 19	Generating functions (Chapter 5)
W, Mar 21	<b>HW 7 due, HW 8 out</b> Generating functions (Chapter 5)
F, Mar 23	Generating functions (Chapter 5)
M, Mar 26	Applications of generating functions (5.2, 5.3)
W, Mar 28	<b>HW 8 due, HW 9 out</b> Branching processes (5.4)
F, Mar 30	The limit theorems
M, Apr 2	The limit theorems
W, Apr 4	<b>HW 9 due, HW 10 out</b> The limit theorems
F, Apr 6	The limit theorems
M, Apr 9	Markov chains (Chapter 6)
W, Apr 11	<b>HW 10 due, HW 11 out</b> Markov chains (Chapter 6)
F, Apr 13	Markov chains (Chapter 6)
M, Apr 16	Markov chains (Chapter 6)
W, Apr 18	<b>HW 11 due, HW 12 out</b> Markov chains (Chapter 6)
F, Apr 20	Markov chains (Chapter 6)
M, Apr 23	Markov chains or selected topics
W, Apr 25	<b>HW 12 due, extra credit HW due, Final out (due April 26)</b> TBD

*Date:* April 16, 2018.