6.3700/6.3702 Fall 2025 SYLLABUS AND CALENDAR

Monday	Tuesday	Wednesday	Thursday	Friday
9/1 Vacation - Labor Day	**9/2** Registration Day	**9/3** **Units 0 & 1 open** **Lecture 0: 54-100, Overview**	**9/4** **Recitation 0: your time to set up MITx platform**	**9/5** **Tutorial 0: your time for Unit 0**
9/8 **Lecture 1: MITx Probability models and axioms** Book: §1.1, 1.2	**9/9** **Recitation 1: L1 (E25-117)**	**9/10 Unit 2 open** **Lecture 2: MITx Conditioning and Bayes' Rule** Book: §1.3-1.4 **PS1 out (L1)**	**9/11** **Recitation 2: L2 (E25-117)**	**9/12** **Tutorial 1: L1 & L2 (rooms TBD)**
9/15 **Lecture 3: MITx Independence** Book: §1.5	**9/16** **Recitation 3: L3**	**9/17 Unit 3 open** **Lecture 4: MITx Counting** Book: §1.6 **PS1 Due (L1)**	**9/18** **Recitation 4: L4**	**9/19** Vacation - Student Holiday. use office hours for help with L3 & L4
9/22 Unit 4 open **Lecture 5: MITx Probability Mass Functions and Expectations** Book: §2.1-2.4	**9/23** **Recitation 5: L5**	**9/24** **Lecture 6: MITx Variance; Conditioning on an Event; Multiple r.v.'s** Book: §2.4-2.6 **PS2 Due (L2, L3)**	**9/25** **Recitation 6: L6**	**9/26** **Tutorial 2: L5 & L6**
9/29 **Lecture 7: MITx Conditioning on a Random Variable; Independence of r.v.'s** Book: §2.6-2.7	**9/30** **Recitation 7: L7**	**10/1 Unit 5 open** **Lecture 8: MITx Probability Density Functions** Book: §3.1-3.3 **PS3 Due (L4)**	**10/2** **Recitation 8: L8**	**10/3** **Tutorial 3: L7 & L8** **Add Date. Last day to add subjects to registration**
10/6 **Lecture 9: MITx Conditioning on an Event; Multiple r.v.'s** Book: §3.4-3.5	**10/7** **Recitation 9: L9**	**10/8** **Lecture 10: MITx Conditioning on a r.v.; Independence; Bayes' Rule** Book: §3.5-3.6 **PS4 Due (L5-L7)**	**10/9** **Recitation 10: L10**	**10/10** **Tutorial 4: L9 & L10**
10/13 Vacation - Indigenous Peoples Day	**10/14** **Quiz 1: MITx Lectures 1-7**	**10/15 Unit 6 open** **Lecture 11: MITx Derived Distributions** Book: §4.1	**10/16** **Recitation 11: L11**	**10/17** **Tutorial 5: L11**
10/20 **Lecture 12: MITx Sums of Independent r.v.'s; Covariance and Correlation** Book: §4.1-4.2	**10/21** **Recitation 12: L12**	**10/22** **Lecture 13: MITx Conditional Expectation & Variance, Sum of a Random Number of r.v.'s** Book: §4.3; 4.5, pp. 240-241, **PS5 Due (L8-L10)**	**10/23** **Recitation 13: L13**	**10/24** **Tutorial 6: L12 & L13**

Monday	Tuesday	Wednesday	Thursday	Friday
10/27 Unit 7 open **Lecture 14: MITx Intro to Bayesian Inference** Book: §8.1-8.2	**10/28** **Recitation 14: L14**	**10/29** **Lecture 15: MITx Linear models with Normal noise** Book: Example 8.3 on pp. 415, 421; pp. 480-482 **PS6 Due (L11-L13)**	**10/30** **Recitation 15: L15**	**10/31** **Tutorial 7: L14 & L15**
11/3 **Lecture 16: MITx Least Mean Squares (LMS) Estimation** Book: pp. 225-226; §8.3	**11/4** **Recitation 16: L16**	**11/5** **Lecture 17: MITx Linear Least Mean Squares (LLMS) Estimation** Book: §8.3 and pp. 225-226 **PS7a Due (L14, L15)**	**11/6** **Recitation 17: L17**	**11/7** **Tutorial 8: L16 & L17**
11/10 Unit 8 open **Lecture 18: MITx Inequalities, Convergence, and the Weak Law of Large Numbers** Book: §5.1-5.3	**11/11** Vacation - Veterans Day: use tutorial to review L18 content.	**11/12** No Lecture: quiz preparation	**11/13** **Quiz 2: MITx Lectures 8-14**	**11/14** **Tutorial 9: L18**
11/17 **Lecture 19: MITx Central Limit Theorem** Book: §5.4	**11/18** **Recitation 18: L19**	**11/19 Unit 9 open** **Lecture 20: MITx The Bernoulli Process** Book: §6.1 **Drop Date. Last day to cancel subjects from registration** **PS7b Due (L16, L17)**	**11/20** **Recitation 19: L20**	**11/21** **Tutorial 10: L19 & L20**
11/24 **Lecture 21: MITx The Poisson Process** Book: §6.2, pp. 309-318	**11/25** **Recitation 20: L21**	**11/26** **Lecture 22: MITx More on the Poisson Process** **PS8 Due (L18, L19)** Book §6.2 pp. 318-325	**11/27** Vacation - Thanksgiving	**11/28** Vacation - Thanksgiving
12/1 Unit 10 open **Lecture 23: MITx Finite-State Markov Chains** Book: §7.1-7.2	**12/2** **Recitation 21: L23**	**12/3** **Lecture 24: MITx Steady-State Behavior of Markov Chains** Book: §7.3 **PS9 Due (L20-L22)**	**12/4** **Recitation 22: L24**	**12/5** **Tutorial 11: L21 & L22**
12/8 **Lecture 25: MITx Absorption Probabilities and Expected Time to Absorption** Book: §7.4	**12/9** **Recitation 23: L25**	**12/10** **Lecture 26: Review for final by TA's** **Last day of classes** **PS10 Due (L23-L25)**	**12/11** No Classes	**12/12** No Classes