# Math/Stat 394 Winter 2019 Schedule

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|---|---|---|
| Week 1 | M | Introduction  Birthday Problem |
| Jan 7, 9, 11 | W | Permutations and Combinations  Appendix C |
| | F | Binomial Coefficients  Appendix D |
| Week 2 | M | Sec. 1.1 Sample Space, Axioms of Probability |
| Jan 14, 16, 18 | W | Sec. 1.2, 1.3 Random Sampling, Infinitely many Outcomes<br>**Homework (HW) 1 due** |
| | F | Sec. 1.4 Inclusion-Exclusion Principles |
| Week 3 | M | **MLK Day** |
| Jan 21, 23, 25 | W | Sec. 1.5 Random Variables |
| | F | Sec. 2.1 Conditional Probability  **HW2 due** |
| Week 4 | M | Sec. 2.2, 2.3 Bayes' Formula, Independence |
| Jan 28, 30, Feb 1 | W | Sec. 2.3 Independence, Independent Random Variables  **HW 3 due** |
| | F | Sec. 2.4 Independent Trials, **Binomial** and **Geometric** Distributions |
| Week 5 | M | **canceled due to snow** |
| Feb 4, 6, 8 | W | Sec. 3.1 Probability Distributions, Probability Densities, |
| | F | Sec. 3.2 Cumulative Distribution Functions, Uniform[a,b]  **HW 4 due** |
| Week 6 | M | **canceled due to snow** |
| Feb 11, 13, 15 | W | **canceled due to snow** |
| | F | **Midterm** |
| Week 7 | M | **Presidents Day** |
| Feb 18, 20, 22 | W | Sec. 3.3 Expectation |
| | F | Sec. 3.4 $E(g(X))$, Linearity of Expectation, Variance  **HW 5 due** |
| Week 8 | M | Sec. 3.4 Variances for binomial, geometric, uniform, MSE, MAD |
| Feb 25, 27, Mar 1 | W | Sec. 3.5 Normal Distribution **HW 6 due** |
| | F | Sec. 4.1 Normal Approximation |
| Week 9 | M | Sec. 4.3 Applications of Normal Approximation,<br>Sec. 4.4 Poisson Distribution |
| Mar 4, 6, 8 | W | Sec. 4.4 Poisson Approximation,<br>Sec. 4.5 Exponential Distribution **HW 7 due** |
| | F | Sec. 4.3 Exponential Approximation To Geo(p)<br>Sec. 5.2 Distribution of $g(X)$ |
| Week 10 | M | More Examples for Distribution of $g(X)$ |
| Mar 11, 13, 15 | W | Sec. 9.1 Markov's and Chebychev's Inequality<br>Sec. 9.2 Weak Law of Large Numbers **HW 8 due** |
| | F | Review/Evaluation |