

$$\int_M d\omega = \int_{\partial M} \omega$$

**Week 1: September 6-9**

- **Lecture 1** - Start 2.1 (sample spaces and events)
- **Lecture 2** - Finish 2.1
- **Lecture 3** - 2.2, 2.3 (properties of probability)

**Week 2: September 12-16**

- **Lecture 4** - 2.4, 2.5 (conditional probability and the law of total probability)
- **Lecture 5** - 2.6, 2.8, 3.1 (independence, random variables, and discrete random variables)
- **Lecture 6** - 3.2, 3.4 (probability distributions, mean and variance of a discrete random variable)

**Week 3: September 19-23**

- **Lecture 7** - 3.6, start 3.7 (binomial, geometric, and negative binomial distributions)
- **Lecture 8** - Finish 3.7, 3.8 (hypergeometric distribution)
- **Lecture 9** - 3.9, 4.1, 4.2 (Poisson distribution, continuous random variables, and probability density functions)

**Week 4: September 26-30**

- **Lecture 10** - 4.3, 4.4 (cumulative distribution functions, mean and variance of a continuous random variable)
- **Lecture 11** - start 4.6 (normal distribution)
- **Lecture 12** - finish 4.6, 4.7 (normal approximation to the binomial, **omit** normal approximation to the Poisson)

**Week 5: October 3-7**

- **Lecture 13** - 4.8, start 5.1 (exponential distribution, two or more random variables, **omit** discrete r.v.'s and **omit** 5.1.3 and **omit** 5.1.5)
- **Lecture 14** - finish 5.1
- **Lecture 15** - 5.2, 5.4 (covariance and correlation, linear functions of random variables)

**Week 6: October 10-14 (Midterm Recess)**

**Week 7: October 17-21**

- **Lecture 16** - 6.1, 6.2 (numerical summaries, stem and leaf plots)
- **Lecture 17** - 6.3, 6.4 (histograms and boxplots)
- **Lecture 18** - 6.7 (probability plots)

**Week 8: October 24-28**

- **Lecture 19** - 7.1, 7.2 (point estimation, central limit theorem)

- **Lecture 20** - 7.3, start 8.1 (concepts of point estimation, confidence interval for the mean, variance known)
- **Lecture 21** - Finish 8.1

**Week 9: October 31 - November 4**

- **Lecture 22** - 8.2, 8.4 (confidence interval for the mean, variance unknown, confidence interval for a population proportion)
- **Lecture 23** - Start 9.1 (hypothesis testing)
- **Lecture 24** - Finish 9.1

**Week 10: November 7-11**

- **Lecture 25** - Start 9.2 (tests on the mean, variance known)
- **Lecture 26** - Finish 9.2, 9.3 (tests on the mean, variance unknown, **omit** 9.3.2)
- **Lecture 27** - 9.5 (tests on a population proportion)

**Week 11: November 14-18**

- **Lecture 28** - 10.2 (inference on the difference of means, variances unknown, **omit** 10.2.2)
- **Lecture 29** - 11.1, 11.2 (linear regression)
- **Lecture 30** - 11.3, 11.4 (properties of least squares estimators, hypothesis tests)

**Week 12: November 21-25**

- **Lecture 31** - 11.5, 11.6 (confidence and prediction intervals, **omit** the C.I. for  $\beta_0$ )
- **Lecture 32** - 11.7, 11.8 (adequacy of the regression model, correlation, **omit** the test and C.I. for  $\rho$ )
- **Lecture 33** - start 13.2 (analysis of variance, **omit** 13.2.5)

**Week 13: November 28 - December 2**

- **Lecture 34** - 13.2 (continued)
- **Lecture 35** - Finish 13.2
- **Lecture 36** - Review

**Week 14: December 5-7**

- **Lecture 37** - Review
- **Lecture 38** - Review

(Classes end on December 7th)