

Math 1710 – Spring 2018 *OpenIntro Statistics (3rd Ed.)*, Tentative Outline

Week of	Section	Topics	Assignment
1/24+26 and week of 1/29	2.1 2.2	Probability: sample spaces, events, independence Conditional probability, tree diagrams, disjoint/independent events, Bayes' theorem, reversed conditioning	1 2.6.1: 2.4, 2.6, 2.8, 2.10, 2.12 2.6.2: 2.16, 2.18, 2.22, 2.24, 2.26 Due Wed 2/7
2/5	2.4 3.4	Discrete random variables: expected value, variance, linear combinations Binomial model: Bernoulli trials, probability, expected value, variance	2 2.6.4: 2.34, 2.36, 2.38, 2.40, 2.42ab 3.6.4: 3.34, 3.36, 3.38ab Due Wed 2/14
2/12	2.5 3.1 3.1	Continuous random variables Normal distribution, standardizing with Z scores, normal probability table, 68-95-99.7 rule Normal probabilities: percentiles, cutoffs, finding parameters	3 2.6.5: 2.44 3.6.1: 3.2, 3.4, 3.12, 3.16 Due Wed 2/21
2/19	3.4 1.2	(February Break Monday) Normal approximation for binomial probabilities Data basics: types of variables, categorical vs quantitative	4 3.6.1: 3.6, 3.8, 3.14 3.6.4: 3.28, 3.30 Due Wed 2/28
2/26	1.7 1.6	Categorical data: contingency tables, pie/bar charts Examining numerical data: median/IQR, boxplots, mean/SD Review for prelim (sections 2.1-2.2, 2.4-2.5, 3.1, 3.4) Fri 3/2: First Prelim (in class)	5 1.9.2: 1.6, 1.8 1.9.6: 1.42, 1.46 (cp. textbook supplement 10), 1.50 1.9.7: 1.66, 1.68 Due Wed 3/7
3/5	6.1.1 4.1.3, 4.2.3, 4.4 7.1	Sampling distribution for a proportion (revisiting 3.4) Sampling models for means, central limit theorem Scatterplots, association, and correlation	6 6.7.1: 6.2, 6.4 4.6.1: 4.2 4.6.4: 4.36, 4.38, 4.42 Due Wed 3/14
3/12	7.2 7.3 1.3 1.4	Regression: least squares, residuals, interpreting slope, intercept, and R^2 Types of outliers in linear regression Data collection principles Observational studies and sampling strategies, random numbers	7 7.5.1: 7.6, 7.8, 7.18 7.5.2: 7.26 7.5.3: 7.32, 7.34 Due Wed 3/21
3/19	1.5 4.2 4.3	Experiments Confidence intervals Hypothesis testing, p-values	8 1.9.4: 1.20, 1.24, 1.26 1.9.5: 1:36 4.6.2: 4.12, 4.16 Due Wed 3/28
3/26	6.1.2-4 4.3.2-3 6.2	Inference for a single proportion Hypothesis testing using confidence intervals, decision errors Difference of two proportions (Week of 4/2: Spring Break)	9 4.6.3: 4.24, 4.26 6.7.1: 6.6, 6.14, 6.20 (cp. 6.12) Due Wed 4/11
4/9	5.1 5.3 5.2	Inference about means: one sample t -test, t -interval, t distribution table Difference of two means: two sample t procedures Paired data	10 4.6.3: 4.28, 4.30, 4.32 6.7.2: 6.26, 6.28, 6.30 Due Wed 4/18
4/16	6.3 6.4	Inference for categorical data: chi-square test for goodness of fit, chi square table Chi-square test for independence/homogeneity	11 5.6.1: 5.4, 5.6, 5.8, 5.10 5.6.2: 5.18, 5.22 5.6.3: 5.28 Due Wed 4/25
4/23		Review for prelim (Sections 1.3-7, 4.2-4, 5.1-3, 6.1-2, 7.1-3) Fri 4/27: Second Prelim (in class)	12 6.7.3: 6.40, 6.42 6.7.4: 6.46, 6.48, 6.50b Due Wed 5/2
4/30	7.4 text supplement	Inferences for Regression: testing a hypothesis about slope/ CI for slope Confidence intervals for predicted mean / prediction intervals	13 7.5.4: 7.36abcd, 7.38, 7.40ab, 7.42 Due Wed 5/9
5/7		Review: Which inference method? Review for final exam	

Assignments may change! Check the course website for the actual assignments and due dates.