

Textbook: Moore, Notz, Fligner, *The Basic Practice of Statistics*, 7e, Freeman, 2015.

| Wk | Date | Chapter | Problems | Due Date | Topics |
|----|---------------|---------|---|---------------|--|
| 1 | W 2/6 | 1 | 6, 8, 10, 12, 27, 28, 33, 36, 38, 43 | M 2/11 | Descriptive statistics: graphical Cat/quant vars; bar graph, stemplot, histogram, time series |
| | F 2/8 | 2 | 4-7, 9, 10-13, 29, 33 | W 2/13 | Descriptive statistics: numerical - shape/center/spread; mean, median, std dev, IQR, outliers, boxplot |
| 2 | M 2/11 | 3 | 4, 6-8, 10, 11, 14, 28, 30 | F 2/15 | Normal distributions z-scores, reading table |
| | W 2/13 | 4 | 1, 8, 10ab, 13, 37-39 | M 2/18 | Scatterplots, correlation |
| | F 2/15 | L | Lab 1 | W 2/20 | Lab 1: Descriptive statistics, scatterplots, correlation add deadline |
| 3 | M 2/18 | 5 | 1, 5, 9, 15, 17, 34, 35, 55, 56 | F 2/22 | Regression SD-line, least-sq regr line for y on x, residuals |
| | W 2/20 | 6 | 1, 3, 5, 6, 20-22, 26, 30 | M 2/25 | Two-way/crosstabs/contingency tables marginal/conditional distributions |
| | F 2/22 | L | Lab 2 | F 3/1 | Lab 2: Regression regression line, residual plot |
| 4 | M 2/25 | 7 | <i>Read Ch. 7 Summary</i> | | <i>Review</i> |
| | W 2/27 | | Exam 1 | | Exam 1: Descriptive Statistics |
| | F 3/1 | 8 | 13, 14, 16, 37, 43, 45, 47, 48 | W 3/6 | Sampling methods Gallup Poll, bias, quota, SRS, stratified, multistage cluster |
| 5 | M 3/4 | 9 | 6, 7, 12-14, 45, 46, 50 | F 3/8 | Design of experiments drop w/o Tues. Subject, factor, treatment, placebo, blind, double-blind; Obs. Study, Rand. Controlled, Matched Pairs, Rand. Block |
| | W 3/6 | 12 | 10, 12, 13, 15-17, 20, 32, 34, 37, 47, 51, 52 | W 3/13 | Probability Random phenomena, sample space, event, prob. model, axioms, random variable |
| | F 3/8 | 12 | - | - | Discrete and continuous random variables Prob. distributions: histogram, density curve |
| 6 | M 3/11 | 15 | 2, 5-9, 11, 13, 35, 36, 38 | M 3/18 | Sampling distributions, Law of Large Numbers |
| | W 3/13 | 15 | - | - | Sampling distribution of Sample Mean, Central Limit Theorem |

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| | F 3/15 | 16 | 1, 2, 4, 5, 7, 10, 19, 21-23 | W 3/20 | Confidence intervals C, z^* , margin of error |
| 7 | M 3/18 | 19 | <i>Read Ch. 19 Summary</i> | | <i>Review</i> |
| | W 3/20 | | Exam 2 | | Exam 2: Probability |
| | F 3/22 | 17 | 1, 3, 11, 14, 16, 17, 30, 33, 44, 45 | W 4/3 | Significance tests H_0 , H_a , test statistic z , P-value, α sig. level half sem |
| | S 3/23 – N 3/31 | | Spring Break | | |
| 8 | M 4/1 | 18 | 2, 6, 8-10, 12, 13, 33, 36 | F 4/5 | One-sample z -test Assumptions of z -test, stat sig \neq practical sig. (power) |
| | W 4/3 | 20 | 1-5, 7, 8abc, 10-12, 38, 41 | M 4/8 | Inference for means, one-sample t -test, matched pairs |
| | F 4/5 | 21 | 1-5, 7, 13, 15, 29, 43 | W 4/10 | Comparing two means, two-sample t -tests |
| 9 | M 4/8 | L | Lab 3 | F 4/12 | Lab 3: Inference for means, t -tests drop w/ Tues. |
| | W 4/10 | 22 | 4, 6, 7, 9-11, 39, 41 | M 4/15 | Inference for proportions |
| | F 4/12 | 23 | 1, 2, 4, 5, 18, 20, 35 | W 4/17 | Comparing two proportions |
| 10 | M 4/15 | 25 | 1, 5, 7, 11, 12, 14, 15 | F 4/26 | Chi-square test of independence |
| | W 4/17 | 25 | - | - | Chi-square goodness-of-fit test |
| | F 4/19 – M 4/22 | | Easter Break | | |
| 11 | W 4/24 | L | Lab 4 | W 5/1 | Lab 4: Chi-square tests |
| | F 4/26 | 24 | <i>Read Ch. 24 Summary</i> | | <i>Review</i> |
| 13 | M 4/29 | | Exam 3 | | Exam 3: Inference |
| | W 5/1 | 27 | 3, 4, 7, 8, 10, 12 | W 5/8 | One-way ANOVA for comparing several means, F test |
| | F 5/3 | 27 | - | - | ANOVA F -statistic discuss final project: handout/pdf with links |

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| 14 | M 5/6 | L | Work on final project, import data set into SPSS | W 5/8 | search for data sets, import data by W 5/8 |
| | W 5/8 | L | Submit prospectus for final project | F 5/10 | Explore data, submit prospectus by F 5/10 , 10pm |
| | F 5/10 | | <i>Research Day – no classes</i> | | |
| 15 | M 5/13 | L | <i>Evaluations</i> | | work on final project |
| | W 5/15 | L | | | work on final project |
| | F 5/17 | L | | | work on final project |
| 115A: M 5/20, 10:15-12:15 p.m. 115C: W 5/22, 1:15-3:15 p.m. | | | | Final Project: Poster Presentations | |