

| Stat 360-0 | | | | Prof. Andrew Ross; MW 9:30-10:45 Pray-H 405 | | CRN 15002 | | | |
|---|-----------|-----|----------|---|---|-----------------------------|--------------------------------------|--|---|
| Stat 360-1 | | | | Prof. Andrew Ross; T/R 2:00-3:15 Pray-H 324 | | CRN 15004 | | | |
| This schedule is shown for the Mon/Wed section. Just add 1 day to turn it into the Tue/Thu section. | | | | | | | | | |
| Class# | Date 2017 | day | unit | Topic | Required Additional | HW Assigned | HW Due | Bonus Excel Material | R goals |
| 1 | 9/6 | Wed | 1 | Intro; randomization example; car-insurance advertising; population vs sample, types of data | m360-ch01-data-types.docx | Ch 1 preview | * = deviation from usual 7-day delay | text-to-columns | importing files |
| 2 | 9/11 | Mon | 1;2 | Discrete vs Continuous; PivotTables, Bar charts, Dotplots; Ch 2 Bias | | Ch 1 | | Pivot Tables | Pivot Table in R |
| 3 | 9/13 | Wed | 2 | Random vs Stratified Samples, etc; Random Rectangles activity | m360-ch02.2-2.3-powerpoint.pptx | Ch 2a; 2b | Ch 1* | left/mid/right and =DATE | handling dates |
| 4 | 9/18 | Mon | 3 | Graphical Methods for Describing Data | | Ch 3 | Ch 2a* | Kernel Density Estimates (KDEs) | Histogram and KDE in R |
| 5 | 9/20 | Wed | 4 | Center, Variability, Boxplots, Empirical Rule, z-scores, Percentiles & Plots | m360-ch04-notes.docx | Ch 4a and 4b | Ch 2b | Marked Scatterplots | Marked Scatterplots |
| 6 | 9/25 | Mon | 5 | Correlation; Regression | | Ch 5a | Ch 3 | plot the percentile curve; dotplot-histogram-crf-etc | fit a linear model; see coeff,r,R^2 |
| 7 | 9/27 | Wed | 5 | Assessing fit; Nonlinear Relationships and Transformations | | 5b preview | Ch 4a and 4b | vlookup | plot residuals; fit log-transformed models |
| 8 | 10/2 | Mon | 5 | 5 wrapup | | Ch 5b | Ch 5a | Solver for nonlinear regression | fit polynomials; nonlinear fits; matrix of scatterplots |
| 9 | 10/4 | Wed | 6 | Definition and Properties of Prob; Conditional Probability; independence, PIE, Bayes, Prob via Simulation | m360-ch06a-powerpoint.pptx and m360-ch06-bayes-table-handout.docx | Ch 6 | | ambulance travel distance simulation | ambulance travel simulation in R |
| 10 | 10/9 | Mon | 7 | Random Variables; Discrete and Continuous Distributions; Mean and StdDev; linear functions and sums | m360-ch07a-notes.docx | Ch 7a | Ch 5b | sumproduct | table joins: merge, dplyr, data.table |
| 11 | 10/11 | Wed | 7 | Binomial, Geometric; Normal; Checking and Transformations for Normality; Binom-Normal; QQ | m360-ch07b-notes.docx | Ch 7b | Ch 6 | dotplot-histogram-crf-qq | pbinom, rbinom, pnorm, qnorm, rnorm; Q-Q |
| 12 | 10/16 | Mon | 8 | Statistics and Sampling Variability; Sampling Distribution of a Mean | | 8 preview | Ch 7a | What-If Data Tables, 1-dim | randomization with replacement |
| 13 | 10/18 | Wed | 8 | Central Limit Theorem; Sampling Distribution of a Proportion | | Ch 8 | Ch 7b | What-If Data Tables, 2-dim | for-loops |
| 14 | 10/23 | Mon | 9 | Point Estimation; Confidence Interval for a Proportion | | Ch 9a | | conditional formatting | |
| 15 | 10/25 | Wed | 9 | Confidence Interval for a Mean (incl. t-distrib) | | Ch 9b | Ch 8 | sparklines | CIs for groups, plotting |
| 16 | 10/30 | Mon | midterm | midterm | | | Ch 9a | | |
| 17 | 11/1 | Wed | 10 | Hypotheses and Test Procedures; Errors in Hypothesis Testing; Proportion | m360-ch10a-powerpoint.pptx | Ch 10a | Ch 9b | countif, sumif, averageif | parallel axis plots |
| 18 | 11/6 | Mon | 10 | Hypothesis Tests for Population Mean; Power and Probability of Type II error | | Ch 10b; midterm corrections | | generating random numbers; seedable-prng | generating artificial data; seeds |
| 19 | 11/8 | Wed | 11 | 2-sample t-test for means (indep); 2-sample t-test for means (paired); skipping 2-proportions | | Ch 11 | Ch 10a | parallel axis plots | t.test (low-priority) |
| 20 | 11/13 | Mon | 12 | Categorical Association part a | handout | Ch 12a; Proposal | Ch 10b | Pivot Tables | contingency table from data |
| 21 | 11/15 | Wed | 12 | Categorical Association part b | handout | Ch 12b | Ch 11; midterm corrections | | chisq.test |
| 22 | 11/20 | Mon | 12 | Categorical Association part c | handout | Ch 12c | Ch 12a; Proposal | Pasting into Word/ppt: live or dead copies? | Rmarkdown? |
| 23 | 11/27 | Mon | 13 | Linear Regression and Correlation: Inferential Methods | m360-ch13-notes.docx | Ch 13 | Ch 12b | Excel Regression Tool | CI on slope; CI on line; prediction interval on line |
| 24 | 11/29 | Wed | calc | Multiple Testing; Regression to the Mean; Covariance; calculus-based methods | m360-ch99-calculus-supplement.docx | | Ch 12c | LiveRegression | |
| 25 | 12/4 | Mon | calc | Calculus-based methods; Poisson Processes | | ch99calc | Ch 13 | What-If Goal Seek | |
| 26 | 12/6 | Wed | | Review Day; Presentation tips | | ch999datafest | | | |
| 27 | 12/11 | Mon | present. | Presentations | | | Presentation and Final Report | | |
| 28 | 12/13 | Wed | | no class--other classes having finals | | | ch99calc and ch999datafest | | |
| | 12/18 | Mon | final | 360-0 final: Mon Dec 18, 9:00-10:30 (A HALF-HOUR EARLY) | | | | | |
| | 12/19 | Tue | final2 | 360-1 final: Tue Dec 19 1:30-3:00 (HALF-HOUR EARLY) | | | | | |