

Stat 360-01				Prof. Andrew Ross; Tue/Thu 2:00-3:15, Pray-H 304	CRN 23138				
Class#	2020	day	unit	Topic	Required Additional Reading	HW Assigned	HW Due	<a href="#">Bonus Excel Material online</a>	R goals
1	7-Jan	Tue	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 ; SQL	importing files
2	9-Jan	Thu	1;2	Discrete vs Continuous; PivotTables, Bar charts, Dotplots; Ch 2 Bias		Ch 1		Pivot Tables	Pivot Table in R
3	14-Jan	Tue	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	16-Jan	Thu	3	Graphical Methods for Describing Data		Ch 3	Ch 2a*	Kernel Density Estimates (KDEs)	Histogram and KDE in R
5	21-Jan	Tue	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	23-Jan	Thu	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	28-Jan	Tue	5	Assessing fit; Nonlinear Relationships and Transformations		5b preview	Ch 4a and 4b	vlookup	plot residuals; fit log-transformed models
8	30-Jan	Thu	5	5 wrapup		Ch 5b	Ch 5a	Solver for nonlinear regression	fit polynomials; nonlinear fits; matrix of scatterplots
9	4-Feb	Tue	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	6-Feb	Thu	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	11-Feb	Tue	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	13-Feb	Thu	8	Statistics and Sampling Variability; Sampling Distribution of a Mean	example Proposals and Reports	8 preview	Ch 7a	What-If Data Tables, 1-dim	randomization with replacement
13	18-Feb	Tue	8	Central Limit Theorem; Sampling Distribution of a Proportion		Ch 8	Ch 7b	What-If Data Tables, 2-dim	for-loops
14	20-Feb	Thu	9	Point Estimation; Confidence Interval for a Proportion		Ch 9a	Ch 8	parallel axis plots	parallel axis plots
	25-Feb	Tue		break week					
	27-Feb	Thu		break week					
15	3-Mar	Tue	9	Confidence Interval for a Mean (incl. t-distrib)		Ch 9b		sparklines	CIs for groups, plotting
16	5-Mar	Thu	midterm	midterm					
17	10-Mar	Tue	10	Hypotheses and Test Procedures; Errors in Hypothesis Testing; Proportion	m360-ch10a-powerpoint.pptx	Ch 10a	Ch 9a		
18	12-Mar	Thu	10	Hypothesis Tests for Population Mean; Power and Probability of Type II error		Ch 10b; midterm corrections	Ch 9b	countif, sumif, averageif	generating artificial data
19	17-Mar	Tue	11	2-sample t-test for means (indep); 2-sample t-test for means (paired); skipping 2-proportions		Ch 11	Ch 10a	generating random numbers	t.test (low-priority)
20	19-Mar	Thu	12	Categorical Association part a	handout	Ch 12a; Proposal	Ch 10b	Pivot Tables	contingency table from data; mosaic plot
21	24-Mar	Tue	12	Categorical Association part b	handout	Ch 12b	Ch 11; midterm corrections	conditional formatting	chisq.test
22	26-Mar	Thu	12	Categorical Association part c	handout	Ch 12c	Ch 12a; Proposal	Pasting into Word/ ppt: live or dead copies?	Rmarkdown?
23	31-Mar	Tue	13	Linear Regression and Correlation: Inferential Methods	m360-ch13-notes.docx	Ch 13	Ch 12b	Excel Regression Tool	CI on slope
24	2-Apr	Thu		Multiple Testing; Regression to the Mean; Covariance; PDF/CDF methods	m360-ch99-calculus-supplement		Ch 12c	LiveRegression	
25	7-Apr	Tue		PDF/CDF-based methods; Poisson Processes		ch99calc or alternate	Ch 13	What-If Goal Seek	dexp, pexp, dpareto, ppareto, etc
26	9-Apr	Thu		PDF/CDF, Poisson; presentation tips	example Presentations	ch999datafest	Project Report	SQL	
27	14-Apr	Tue	pres ent.	Presentations			Project Presentation and ch99calc or alternate		
28	16-Apr	Thu	pres ent.	Presentations					
	21-Apr	Tue		1:30-3:00 final exam, HALF-HOUR EARLY!			ch999datafest		