

Class#	2018	day	unit	Topic	Required Additional Reading	HW Assigned	HW Due	<a href="#">Bonus Excel Material online</a>	R goals
1	1/4	Thu	1	Introductions/Syllabus. PivotTables, Bar charts, Dotplots	m360-ch01-data-types.docx	Ch 1 preview		text-to-columns	importing files
2	1/9	Tue	1;2	randomization example; car-insurance advertising; population vs sample, types of data		Ch 1		Pivot Tables	Pivot Table in R
3	1/11	Thu	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	1/16	Tue	3	Graphical Methods for Describing Data		Ch 3	Ch 2a*	Kernel Density Estimates (KDEs)	Histogram and KDE in R
5	1/18	Thu	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	1/23	Tue	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	1/25	Thu	5	Assessing fit; Nonlinear Relationships and Transformations		5b preview	Ch 4a and 4b	vlookup	plot residuals; fit log-transformed models
8	1/30	Tue	5	5 wrapup		Ch 5b	Ch 5a	Solver for nonlinear regression	fit polynomials; nonlinear fits; matrix of scatterplots
9	2/1	Thu	6	Definition and Properties of Prob; Conditional Probability; independence, PIE, Bayes, Prob via Simulation	m360-ch06a-powerpoint.pptx, m360-ch06-bayes-table-handout.docx	Ch 6		ambulance travel distance simulation	ambulance travel simulation in R
10	2/6	Tue	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	2/8	Thu	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	2/13	Tue	8	Statistics and Sampling Variability; Sampling Distribution of a Mean		8 preview	Ch 7a	What-If Data Tables, 1-dim	randomization with replacement
13	2/15	Thu	8	Central Limit Theorem; Sampling Distribution of a Proportion		Ch 8	Ch 7b	What-If Data Tables, 2-dim	for-loops
	2/20	Tue		break week					
	2/22	Thu		break week					
14	2/27	Tue	9	Point Estimation; Confidence Interval for a Proportion		Ch 9a	Ch 8	conditional formatting	
15	3/1	Thu	9	Confidence Interval for a Mean (incl. t-distrib)		Ch 9b		sparklines	CIs for groups, plotting
16	3/6	Tue		midterm					
17	3/8	Thu	10	Hypotheses and Test Procedures; Errors in Hypothesis Testing; Proportion	m360-ch10a-powerpoint.pptx	Ch 10a	Ch 9a	parallel axis plots	parallel axis plots
18	3/13	Tue	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	3/15	Thu	11	2-sample t-test for means (indep); 2-sample t-test for means (paired); skipping 2-proportions	example Proposals and Reports	Ch 11	Ch 10a	generating random numbers	t.test (low-priority)
20	3/20	Tue	12	Categorical Association part a	handout	Ch 12a; Proposal	Ch 10b	Pivot Tables	contingency table from data; mosaic plot
21	3/22	Thu	12	Categorical Association part b	handout	Ch 12b	Ch 11; midterm correction		chisq.test
22	3/27	Tue	12	Categorical Association part c	handout	Ch 12c	Ch 12a; Proposal	Pasting into Word/ ppt: live or dead copies?	Rmarkdown?
23	3/29	Thu	13	Linear Regress. and Correl.: Inferential Methods	m360-ch13-notes	Ch 13	Ch 12b	Excel Regression Tool	CI on slope
24	4/3	Tue	calc	Multiple Testing; Regression to the Mean; Covariance; calculus-based methods	m360-ch99-calculus-supplement		Ch 12c	LiveRegression	
25	4/5	Thu	calc	Calculus-based methods; Poisson Processes		ch99calc	Ch 13	What-If Goal Seek	dexp, pexp, dpareto, ppareto, etc
26	4/10	Tue	calc	Calc, Poisson; presentation tips	example Presentations	ch999datafest		SQL	
27	4/12	Thu		Presentations			Presentatio n and Final Report		
28	4/17	Tue		Review day; last day of EMU classes			ch99calc		
	4/19	Thu	Final	Sec0: exam 11:00 a.m. - 12:30 p.m. (usual class time)			ch999datafest		
	4/24	Tue	Final	Sec1: exam 1:30pm-3:00pm (HALF-HOUR EARLY!)					