

AMS 7

Tentative syllabus and reading list: Summer 2016

An approximately 820–page packet of course materials will serve as the text for the course and will be made available at cost in class during the first week (in this packet, DD = draft book by David Draper [O = older version, N = newer version], LN = lecture notes).

Lecture Number	Date	Topic	Readings	
			Chapters in DD	Pages in LN
1	20 Jun	Populations and samples; data types	1 (O, N), 2 (O)	1–49
2	22 Jun	Graphical and numerical descriptive methods	2 (N), 3 (O, N)	50–66
3	24 Jun	Using the normal distribution descriptively; controlled experiments	4 (O), 5 (O)	67–83
4	27 Jun	Controlled experiments; observational studies	5 (O), 6 (O)	84–94
5	29 Jun	Probability; conditional probability	7 (O), 8 (O)	95–118
6	1 Jul	Probability models for sums and means	9 (O), 10 (O)	119–136
	4 Jul	Holiday (no class)		
7	6 Jul	Statistical models for means; interval estimation	11 (O)	137–160
8	8 Jul	Sample size determination; hypothesis testing	—	161–173
9	11 Jul	Pitfalls of hypothesis testing; power	—	174–185
10	13 Jul	Two-sample problems (dichotomous and continuous outcomes)	—	186–206
11	15 Jul	Two-sample problems (continued); correlation	—	207–244
12	18 Jul	Regression	—	245–257
13	20 Jul	Analysis of variance (ANOVA)	—	269–289
14	22 Jul	Categorical data analysis	—	290–311

Written work for AMS 7 will be assigned and due according to the following approximate schedule:

Assignment	Handed Out	Due In
Homework 1	20 Jun	27 Jun
Homework 2	27 Jun	5 Jul
Takehome Midterm	5 Jul	11 Jul
Homework 3	11 Jul	18 Jul
Homework 4	18 Jul	22 Jul
Takehome Final	22 Jul	25 Jul