MA221: Statistics I (Section B)

Baker University — Fall 2023

Each section below is from *Statistics: Unlocking the Power of Data* (Third Edition) by Lock[5].

Exam 1: Categorical and Quantitative Variables

date	day	section	topic(s)
8/23	W	Course Orientation	∘ course expectations ∘ course schedule ∘ course syllabus
8/25	F	§1.1: The Structure of Data	∘ data ∘ categorical and quantitative variables ∘ explanatory and response variables

date	day	section	topic(s)
8/28	M	§1.2: Sampling from a Population	∘ statistical inference ∘ sampling bias ∘ simple random samples
8/30	W	§1.3: Experiments and Observational Studies	∘ association vs. causation ∘ confounding variables ∘ studies vs. experiments
9/1	F	§2.1: Categorical Variables	∘ summary statistics ∘ visualizing data

date	day	section	topic(s)
9/4	M	*Labor Day*	
9/6	W	§2.1: Categorical Variables	Workshop 1
9/8	F	§2.2: One Quantitative Variable (Shape and Center)	∘ skew ∘ symmetry ∘ mean ∘ median ∘ outliers

date	day	section	topic(s)
9/11	M	§2.2: One Quantitative Variable (Shape and Center)	Workshop 2
9/13	W	§2.3: One Quantitative Variable (Measure of Spread)	∘ st'd deviation ∘ range ∘ percentiles
9/15	F	§2.3: One Quantitative Variable (Measure of Spread)	Workshop 3

date	day	section	topic(s)
9/18	M	§2.4: Quantitative / Categorical Relationships	Workshop 4
9/20	W	§2.5: Scatterplot and Correlation	Workshop 5
9/22	F	Exam 1 Review	

date	day	section	topic(s)
9/25	M	**Exam 1**	

Exam 2: Confidence Intervals and Linear Regression

date	day	section	topic(s)
9/27	W	§2.6: Linear Regression	∘ predicted values ∘ residuals ∘ slope and intercept of the regression line
9/29	F	§2.6: Linear Regression	Workshop 6

date	day	section	topic(s)
10/2	M	§3.1: Sampling Distributions	∘ statistics vs. parameter ∘ standard error ∘ sample size ∘ random sampling
10/4	W	§3.2: Confidence Intervals	∘ interval estimate ∘ margin of error ∘ misinterpretations
10/6	F	§3.2: Confidence Intervals	Workshop 7

date	day	section	topic(s)
10/9	M	§3.3: Bootstrap Confidence Intervals	∘ bootstrap sample ∘ bootstrap dist'n ∘ bootstrap sample ∘ standard error
10/11	W	§3.4: Bootstrap Confidence Intervals (Percentiles)	∘ sample size ∘ interval width
10/13	F	*Fall Break*	

date	day	section	topic(s)
10/16	M	§3.4: Bootstrap Confidence Intervals (Percentiles)	Workshop 8
10/18	W	§4.1: Hypothesis Testing	Workshop 9
10/20	F	Exam 2 Review	

date	day	section	topic(s)
10/23	M	**Exam 2**	

Exam 3: Hypothesis Testing and Statistical Inference

date	day	section	topic(s)
10/25	W	§4.1: Hypothesis Testing	Workshop 10
10/27	F	§4.2: Measuring Evidence with p -Values	∘ randomization dist'n ∘ randomization tests ∘ calculation of p-values

date	day	section	topic(s)
10/30	M	§4.2: Measuring Evidence with p -Values	Workshop 11
11/1	W	§4.3: Determining Statistical Significance	∘ interpreting p-value size ∘ formal decisions ∘ significance level
11/3	F	§4.3: Determining Statistical Significance	Workshop 12

date	day	section	topic(s)
11/6	M	§4.4: A Closer Look at Testing	Workshop 13
11/8	W	§4.5: Making Connections	Workshop 14
11/10	F	§5.1: Hypothesis Testing (Normal Distributions)	∘ Central Limit Th'm ∘ st'd test statistic

date	day	section	topic(s)
11/13	M	§5.2: Confidence Intervals (Normal Distributions)	∘ boostrap dist'n ∘ standardization
11/15	W	§5.2: Confidence Intervals (Normal Distributions)	Workshop 15
11/17	F	Exam 3 Review	

date	day	section	topic(s)
11/20	M	**Exam 3**	
11/22	W	*Thanksgiving Break*	
11/24	F	*Thanksgiving Break*	

Final Exam Review

date	day	section	topic(s)
11/27	M	Final Exam Review	
11/29	W	Final Exam Review	
12/1	F	Final Exam Review	

date	day	section	topic(s)
12/4	M	Final Exam Review	
12/6	W	Final Exam Review	
12/8	F	Final Exam Review	

Final Exam: Wednesday, December 13; 8:30 to 11:30 AM; Collins Library 104