

MA221: Statistics I (Section B)

Baker University — Spring 2024

Each section is from the text *Statistics: Unlocking the Power of Data* (Third Edition) by Lock⁵.

Exam 1: Categorical Variables and Random Sampling

date	day	section	topic(s)
1/29	M	§1.1: The Structure of Data	<ul style="list-style-type: none">○ categorical variables○ quantitative variables○ explanatory variables○ response variables
1/31	W	§1.2: Sampling from a Population	<ul style="list-style-type: none">○ population vs. sample○ sampling bias○ simple random samples○ methods of sampling
2/2	F	§1.3: Experiments and Observat'l Studies	<ul style="list-style-type: none">○ association vs. causation○ confounding variables○ experiment vs. observation

date	day	section	topic(s)
2/5	M	§2.1: Categorical Variables	<ul style="list-style-type: none">○ summary statistics○ visualizing data
2/7	W	§2.1: Categorical Variables	Workshop 1
2/9	F	Exam 1 Review	

date	day	section	topic(s)
2/12	M	Exam 1	<ul style="list-style-type: none">○ §1.1: The Structure of Data○ §1.2: Sampling from a Population○ §1.3: Experiments and Observational Studies○ §2.1: Categorical Variables

Exam 2: Quantitative Variables and Linear Regression

date	day	section	topic(s)
2/14	W	§2.2: One Quantitative Variable (Shape and Center)	<ul style="list-style-type: none">○ skewness○ symmetry○ mean○ median○ outliers
2/16	F	§2.2: One Quantitative Variable (Shape and Center)	Workshop 2

date	day	section	topic(s)
2/19	M	§2.3: One Quantitative Variable (Measures of Spread)	<ul style="list-style-type: none"> ○ st'd deviation ○ range ○ quartiles
2/21	W	§2.3: One Quantitative Variable (Measures of Spread)	Workshop 3
2/23	F	§2.4: Boxplots and Quant'tive / Cat'l Relationships	Workshop 4

date	day	section	topic(s)
2/26	M	§2.5: Scatterplot and Correlation	Workshop 5
2/28	W	§2.6: Linear Regression	<ul style="list-style-type: none"> ○ least squares regression ○ predicated values ○ residuals ○ slope and intercepts
3/1	F	§2.6: Linear Regression	Workshop 6

date	day	section	topic(s)
3/4	M	Exam 2 Review	
3/6	W	Exam 2	<ul style="list-style-type: none"> ○ §2.2: One Quantitative Variable (Shape and Center) ○ §2.3: One Quantitative Variable (Measures of Spread) ○ §2.4: Boxplots and Quant'tive / Cat'l Relationships ○ §2.5: Scatterplot and Correlation ○ §2.6: Linear Regression

Exam 3: Confidence Intervals and Sampling Distributions

date	day	section	topic(s)
3/8	F	§3.1: Sampling Distributions	<ul style="list-style-type: none"> ○ statistics vs. parameters ○ random sampling ○ sample size ○ standard error

date	day	section	topic(s)
3/11	M	§3.2: Confidence Intervals	<ul style="list-style-type: none"> ○ interval estimate ○ margin of error ○ misinterpretations
3/13	W	§3.2: Confidence Intervals	Workshop 7
3/15	F	§3.3: Bootstrap Confidence Intervals	<ul style="list-style-type: none"> ○ bootstrap sample ○ bootstrap distribution ○ bootstrap confidence intervals ○ standard error

date	day	section	topic(s)
3/25	M	§3.4: Bootstrap Confidence Intervals (Percentiles)	<ul style="list-style-type: none"> ○ sample size ○ interval width
3/27	W	§3.4: Bootstrap Confidence Intervals (Percentiles)	Workshop 8

date	day	section	topic(s)
4/1	M	§5.2: Confidence Intervals (Normal Dist'n)	<ul style="list-style-type: none"> ○ standardized test statistic ○ standardization ○ computing p-values
4/3	W	§5.2: Confidence Intervals (Normal Dist'n)	Workshop 9
4/5	F	Exam 3 Review	

date	day	section	topic(s)
4/8	M	Exam 3	<ul style="list-style-type: none"> ○ §3.1: Sampling Distributions ○ §3.2: Confidence Intervals ○ §3.3: Bootstrap Confidence Intervals ○ §3.4: Bootstrap Confidence Intervals Using Percentiles ○ §5.2: Confidence Intervals Using the Normal Distribution

Exam 4: Hypothesis Testing and Statistical Inference

date	day	section	topic(s)
4/10	W	§4.1: Hypothesis Testing	<ul style="list-style-type: none"> ○ statistical test ○ statistic vs. parameter ○ null hypothesis ○ alternative hypothesis ○ interpretation
4/12	F	§4.1: Hypothesis Testing	Workshop 10

date	day	section	topic(s)
4/15	M	§4.2: Measuring Evidence with p -Values	<ul style="list-style-type: none"> ○ randomization distribution ○ randomization tests ○ calculation of p-values
4/17	W	<i>Scholars Symposium</i>	
4/19	F	§4.2: Measuring Evidence with p -Values	Workshop 11

date	day	section	topic(s)
4/22	M	§4.3: Determining Statistical Significance	<ul style="list-style-type: none"> ○ interpreting p-values ○ significance level ○ formal decisions
4/24	W	§4.3: Determining Statistical Significance	Workshop 12
4/26	F	§4.4: A Closer Look at Testing	Workshop 13

date	day	section	topic(s)
4/29	M	§4.5: Making Connections	Workshop 14
5/1	W	§5.1: Hypothesis Tests (Normal Dist'n)	Workshop 15
5/3	F	Exam 4 Review	

date	day	section	topic(s)
5/6	M	Exam 4	

date	day	section	topic(s)
5/8	W	Final Exam Review	
5/10	F	Final Exam Review	Final Exam Practice Test

Our **final exam** will be held Wednesday, May 15 from 1:00 PM to 4:00 PM in Collins Library 104.