Salisbury University Department of Mathematical Sciences

Topic	Weeks
Estimators, unbiased, minimum variance, Central Limit Theorem	
• Lab 7: Sampling Distributions and the Central Limit Theorem: Illustration via simulation and applications	
• Lab 8: Concepts and Review: A review of some of the procedures and concepts learned in the previous labs.	
Chapter 7: Estimation (One Sample)	1.5
Con dence intervals for means, proportions, sample size	
• Lab 9: Estimation; Con dence intervals for means and proportions; demonstration via simulation and applications	
• Lab 10: Decision Making: Applet simulations of hypothesis testing to study types of errors and probabilities of error.	
Chapters 8 & 14: Tests of Hypothesis (One Sample)	1
Tests for means, sign test, Wilcoxon signed rank test, tests for proportions, Type I and Type II error, power	
• Lab 11: Hypothesis Tests (one sample): Parametric and non-parametric tests for means, medians, and proportions; demonstration via simulation and applications	
Chapters 9 & 14 Con dence Intervals & Tests of Hypotheses (Two Samples: Paired & Independent)	1.5
Paired: t, Wilcoxon signed rank, sign; Independent: z, t, Mann-Whitney (Wilcoxon Rank Sum)	
• Lab 12: Hypothesis Tests (two samples): Parametric and non-parametric tests for means, medians, and proportions; demonstration via simulation and applications	
Chapter 11: Simple Linear Regression	1
Least squares, inferences about the slope, estimation and prediction	
• Lab 13: Simple Linear Regression: Constructing and interpreting tted line plots, estimation and prediction, inferences about slope.	
Selected Topics	1
Chapter 10 | One-way Analysis of Variance or Chapter 13 | Chi-Square Tests	
Tests	1
Total	14

Evaluation

Homework and quizzes	10%
Lab attendance	5%
Lab reports and project	25%
Tests	40%
Final Exam	20%

- Free tutoring is available for this course in the Spring and Fall semesters.
- Clear descriptions of thought processes, evidence of critical thinking, and e ective communication must be demonstrated in written work.
- Writing Across the Curriculum: Students will be expected to communicate mathematics and mathematical ideas e ectively in speech and writing. At the University Writing Center, trained consultants are ready to help you at any stage of the writing process. In addition to the important writing instruction that occurs in the classroom and during professors' o ce hours, the Center o ers another site for learning about writing. All students are encouraged to make use of these important services.
- NOTE: Once a student has received credit, including transfer credit, for a course, credit may not be received for any course with material that is equivalent to it or is a prerequisite for it.