

SU DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
SYLLABUS (Tentative)
MATH 214 Statistical Thinking Laboratory

INTENDED FOR: Students majoring in mathematics or other sciences.

OBJECTIVES: To introduce the concepts of descriptive and inferential statistics in a hands-on setting.

PREREQUISITE: MATH 155, MATH 216 or equivalent.

TECHNOLOGY: THIS COURSE IS COMPUTER DEPENDENT. MINITAB will be used throughout the course.

	<i>Weeks</i>
<i>Minitab Essentials</i>	1.5
File management, descriptive statistics techniques, and graphing (single- and multi-variable)	
<i>Data Collection Issues</i>	0.5
Obtaining reliable data from published sources, measurement issues, and getting data into Minitab	
<i>Probability</i>	2.0
Probability & Conditional Probability from tallies; PDF's, CDF's, and inverse PDF's; and simulation of random experiments	
<i>Discrete Random Variables</i>	1.5
Distribution characteristics and applications, including Binomial, Geometric, Hypergeometric, and Poisson	
<i>Continuous Random Variables</i>	1.5
Distribution characteristics and applications, including Uniform, Exponential, and Normal	
<i>Sampling Distributions and the Central Limit Theorem</i>	2.0
Illustration via simulation and applications	
<i>Estimation</i>	1.0
Confidence intervals for means and proportions; demonstration via simulation and applications	
<i>Hypothesis Tests (one sample)</i>	2.0
Parametric and non-parametric tests for means, medians, and proportions; demonstration via simulation and applications	
<i>Hypothesis Tests (two samples)</i>	1.0
Parametric and non-parametric tests for means, medians, and proportions; demonstration via simulation and applications	
<i>Simple Linear Regression</i>	1.0
Constructing and interpreting fitted line plots, estimation and prediction, inferences about slope	

GRADING SCALE

90%-100%	A
80%-89%	B
70%-79%	C
60%-69%	D
0%-59%	F

GRADES

Lab Reports & Portfolios	70%
Final Exam	30%

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.

ASSESSMENTS: Students will be given a lab assignment each week. Students are encouraged to complete as much as possible during lab time. All assignments are due one week after assignment is posted. In addition of weekly lab assignments there will be final project that students will be presenting the last week of classes.

WRITING ACROSS THE CURRICULUM: Writing is a tool used throughout mathematics and its applications for Learning and Communicating. Correct grammar, spelling, and use of the English language will be taken into consideration when grading homework assignments. At the University Writing Center at Herb's Place (Guerrieri University Center, room 213), trained consultants are ready to help you at any stage of the writing process. It is often helpful for writers to share their work with an attentive reader. Consultations allow writers to test and refine their ideas before having to hand papers in or to release documents to the public. In addition to the important writing instruction that occurs in the classroom and during office hours, the center offers another site for learning about writing. All undergraduates are encouraged to make use of this important student service. For more information about the writing center's hours and policies, visit the writing center or its website.

ACCOMMODATIONS:

Any student who feels that they may require an accommodation in this course, based on the impact of a disability, should contact the instructor as soon as possible to arrange for a meeting to coordinate any and all accommodations. Any student who wishes to contact the Office of Student Disability Support Services, for further information, should do so by calling 410-677-6536 (Voice) or 410-543-6083 (TTY); emailing disabilityservices@salisbury.edu; or visiting Guerrieri University Center, Room 242.