SOUTHEASTERN LOUISIANA UNIVERSITY
DEPARTMENT OF MATHEMATICS
MATH 2410 COURSE INFORMATION SHEET
Effective Fall 2024

COURSE TITLE: Elementary Statistics   **CREDIT:** 3 semester hours

TEXT: Allan G. Bluman, *A Brief Version: Elementary Statistics: A Step by Step Approach*
11th edition, McGraw Hill Education, 2023

PREREQUISITE: MATH 1050 or 1070 or 1610

CATALOGUE DESCRIPTION: An introduction to descriptive and inferential statistics. Topics include: organizing and displaying of data; measures of central tendency, position, and dispersion; correlation and linear regression; discrete and continuous probabilities; normal distribution; Student t-distribution; sampling distributions; confidence intervals; and hypothesis testing.

COURSE OBJECTIVES – the section numbers in the textbook covering these objectives are given in parentheses:

Identify the population and sample from a research objective..1.1

Decide whether a variable is quantitative or qualitative...1.2

Construct a histogram from a list of quantitative data 2.2

Find the mean, median and mode from a list of quantitative data 3.1

Find the range and standard deviation from a list of quantitative data 3.2

Find the mean and standard deviation of a frequency table..3.2

Find and interpret standard scores 3.3

Find the interquartile range for a quantitative data set..3.3

Find the five-number summary for a quantitative data set..3.4

Construct a modified boxplot (i.e. possible outliers are removed from the data set,
but their locations are noted by a special symbol such as an asterisk.) 3.4

Make a scatter diagram for two quantitative variables.. 10.1

Find and interpret the correlation coefficient between two quantitative variables 10.1

Find the equation of the least squares linear regression line between two
quantitative variables and plot this line on the corresponding scatter diagram............... 10.2

Compute and interpret the value of the coefficient of determination between two
quantitative variables.. 10.3

Approximate the probability of an event using the empirical approach..................................4.1

Decide whether or not a distribution is in fact a discrete probability distribution..................5.1

Compute the mean and standard deviation of a discrete probability distribution...................5.2

Find probabilities for a binomial experiment..5.3

Find the mean and standard deviation for a binomial experiment 5.3

Find probabilities involving a normal distribution..6.1

Find percentiles and cutoff scores corresponding to given probabilities
for a normal distribution...6.2

Decide whether or not a data set is normally distributed..6.2

Find a probability involving the mean using the Central Limit Theorem 6.3

Determine a confidence interval for a mean where σ is known 7.2

Determine a confidence interval for a mean where σ is unknown.......................................7.3

Determining confidence intervals and minimum sample size for proportions.........................7.4

NOTE: All sections of Math 2410 will have a minimum of 3 regular examinations and a final examination, in addition to quizzes and/or homework.