

**NORTH FLORIDA COMMUNITY COLLEGE**  
**COLLEGE ALGEBRA**  
**STA 2023**

**Course Description:** Topics studied will be from both Descriptive and Inferential Statistics. These will include sampling, displays, and measures used for descriptive techniques. We will also cover Probability and Probability Distributions to include the normal distribution. Some of the more commonly used hypothesis tests and confidence intervals will be examined for one or two samples. In addition we look at regression and simple linear regression. We will cover techniques appropriate for continuous as well as discrete variables. The emphasis will be on understanding not on computation. We will rely heavily on the graphics calculator for both computation and graphics displays.

**Text:** Statistics: Informed Decisions Using Data, Sullivan, 2<sup>nd</sup> ed, PH, 2007

**Instructor:** Phillip Taylor – email: [taylorp@nfcc.edu](mailto:taylorp@nfcc.edu) phone: 850.973.1647  
Office: Science Annex Office Suite (Bldg 5)

**Grading:** 90 – 100 = A, 80 – 89 = B, 70 – 79 = C, 60 – 69 = D, Below 60 = F

**Academic Dishonesty:** Representing or turning in the work of another as one's own is a serious offense, and will result in the student receiving an F in the course.

**Evaluation:** There will be 5 tests worth 1/8 of the grade each, for a total of 5/8. There will be regular quizzes and assignments, some in class, some out of class, some announced, some not, worth 1/8 of the grade. The Comprehensive Final is worth 1/4 of the grade.

**Makeups:** If you know ahead of time you are going to miss a test, you may arrange with me to take it at an earlier time, if possible. Otherwise, the Final will count for missed tests. Quizzes, assignments, etc may not be handed in late or made up. Material may be slid under my office door during class.

**Calculator:** You will need a TI 82/83/84 calculator in this course. You will need to use it and bring it to class each day.

**Absences:** If you miss, call or e-mail me or another student to get assignments and information, as material will not be repeated in class on your return. The responsibility is yours.

**Tardies:** If you can't be here on time, or need to leave early, don't show up.

**Class Rules:** You are expected to act in a responsible, adult manner designed to help you learn College Algebra while not hindering anyone else's learning. Do not talk, use

portable electronic devices, take a call, study or do work for another class, socialize, or do anything but come to class, pay attention and participate.

**Exams:** Dates for the Exams are: Jan 29, Feb 21, March 14, April 9 & April 25. The Final is Monday, April 30, at 11:40

**ADA:** Students requiring modifications due to a disability should register with the Office for Students with Disabilities in the Fine Arts Building.

**Library:** The library is a resource available to you in person and online.

**Course Goals Expected Learning Outcomes::**

*Descriptive Statistics*

Identify types of data and sampling methods

Be able to summarize and organize data with tables and graphs

Identify and understand features and differences between common types of frequency distributions

Understand measures of Central Tendency and how measures of central tendency relate for common types of frequency Distributions

Understand measures of variation and skewness

Be able to construct and interpret measures of position and box plots

Be able to compute and interpret Pearson's  $r$

Be able to find line of regression and its relationship to Pearson's  $r$

*Probability and probability distributions*

Understand the definition of probability

Understand what Law of large numbers tells us about theoretical probability

Be able to use Addition and Multiplication Rule for compound probability

Understand the difference between Discrete & continuous random variable

Understand the properties of and be able to find probabilities for the Normal Probability Distribution

Be able to find score for given normal distribution probability

Understand the Central Limit Theorem and how it applies to Sampling distributions

*Inferential Statistics*

Understand the difference between point and interval estimates for parameters

Be able to find and interpret a confidence interval for population mean, Standard deviation, and binomial  $p$

Understand how to conduct and interpret a hypothesis test for population Mean, standard deviation or variance, and binomial  $p$