

**Miami Dade College**  
**STA 2023 – Statistical Methods I**

Course Description: The student in this course will acquire knowledge in the following topics: collecting, grouping, and presenting data; measures of central tendency and dispersion; probability; testing hypotheses; confidence intervals, and correlation. (3 hr. lecture)

*Co-requisite:* MAC 1105 or higher.

Competency 1: The student will be able to analyze data by:

- a. Constructing and interpreting frequency tables and graphs such as bar graphs, pie charts and stem-and-leaf plots.
- b. Computing and interpreting the measures of centrality: the mean, median, mode and midrange.
- c. Computing and interpreting the measures of dispersion: the range, variance and standard deviation.

Competency 2: The student will be able to apply the measures of position by:

- a. Computing z-scores.
- b. Applying the Empirical Rule to the Normal Distribution.
- c. Applying the Chebyshev's Rule to the Non-Normal (or unknown) Distributions.

Competency 3: The student will be able to apply the counting principles by:

- a. Defining the Fundamental Counting Principle.
- b. Computing the possible outcomes of compound events.
- c. Computing Combinations and Permutations.

Competency 4: The student will be able to apply basic probability theory by:

- a. Describing a sample space and an event.
- b. Calculating probabilities of simple, compound and conditional events.