

SOPHIA Learning

STAT0050: Foundations of Statistics (2 semester credits)

COURSE DESCRIPTION

The course teaches foundational statistics skills that will enable students to be successful in a college level Statistics course. Students will learn about fundamental concepts in statistics such as central tendency, variation, correlation, probability, and statistical analysis.

Course Effective Dates: February 2019 - Present

Prerequisite(s): Lower-division baccalaureate/associate degree course – no prerequisites

Length of course: This is a self-paced course. Students have 60 days with an additional 30-day extension (if needed) to complete the course.

ACE CREDIT® Recommendation: In the lower-division baccalaureate/associate degree category, 2 semester hours in statistics or mathematics.

LEARNING OUTCOMES Upon completion of the course, the student will be able to:

1. Evaluate statistical methods
2. Calculate probability, measures of central tendency, and measures of variation
3. Interpret descriptive and inferential statistics
4. Apply statistical concepts in context

OUTLINE OF MAJOR CONTENT AREAS

- What is Statistics?
- Experiments
- Nominal, Ordinal, Interval, and Ratio Data
- Classifying Data
- Determining the Center of Data
- Graphing Data
- Normal Distribution
- Skewed Distributions
- Range
- Variation
- Correlation
- Correlation and Causation

- Probability
- Independent and Dependent Events
- Normal Distributions and Probability
- Standard Normal Distribution
- Calculating z-Scores
- Z-Scores and Probability
- Data from Multiple Samples
- Determining Likelihood of a Mean
- Determining Significance Levels
- Type I and Type II Errors
- Confidence Intervals

GRADING This is a pass/fail course. Students are required to complete all 5 formative and 2 summative assessments with an overall course average of 70% or better.