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

PREREQUISITES: Lower-division baccalaureate/associate degree course – no prerequisites

LENGTH OF COURSE: This is a self-paced course. Students may use as much or as little time as needed to complete the course.

ACE CREDIT® RECOMMENDATION: In the lower-division baccalaureate/associate degree category, 2 semester hours in elementary statistics (10/21).

GRADING: This is a pass/fail course. Students must complete 5 Challenges (formative assessments) and 3 Milestones (summative assessments) with an overall score of 70% or better.

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

© 2021 Sophia Learning