Information about STAT 1350

Course and Number: STAT 1350 – Elementary Statistics  
Credits: 3  
Class Hours Per Week: 3

Prerequisites: MATH 1030 or 1050 with a “C” or better, or placement by COMPASS, ACT test, or MATH 1099

COURSE DESCRIPTION: STAT 1350 is designed to acquaint students with statistical methods used in gathering and analyzing data. The course includes survey methods, graphical displays of data, descriptive statistics, the Normal distribution, correlation and linear regression, basic concepts in probability and simulation, sampling distributions and the Central Limit Theorem, confidence intervals, and significance testing.

SPECIAL COURSE REQUIREMENTS: None

LEARNING OUTCOMES
• Conduct and interpret a valid sample survey.
• Conduct and interpret a valid experiment.
• Produce and measure ethically sound data.
• Appropriately display a data distribution with graphs.
• Calculate and interpret measures of center and spread.
• Know the properties and applications of the Normal distribution.
• Determine simple correlation and linear regression equations and interpret results.
• Calculate and interpret probabilities using simulation.
• Understand the properties of sampling distributions.
• Calculate and interpret confidence intervals for means and proportions (single sample).
• Conduct and interpret hypothesis tests for means and proportions (single sample) using the p-value method.

GENERAL EDUCATION GOALS: This course addresses the following Columbus State general education goals:
• Critical Thinking
• Quantitative Literacy

TEXTBOOK, MANUALS, REFERENCES, AND OTHER REQUIRED MATERIALS:
• Texas Instruments’ TI-83, TI-83 PLUS, or TI-84 calculator (REQUIRED).
UNITS OF INSTRUCTION:
- Sample Surveys (Chapters 1-4)
- Experiments (Chapter 5-6)
- Data Ethics and Measurement (Chapters 7-9)
- Graphical Displays of Data (Chapters 10-11)
- Descriptive Statistics (Chapter 12)
- Normal Distribution (Chapter 13)
- Correlation and Regression (Chapters 14-15)
- Probability and Simulations (Chapters 17, 19-20)
- Sampling Distributions (Chapters 18 and 21 along with other sections throughout text)
- Confidence Intervals (Chapter 21)
- Significance Testing (Chapters 22-23)

GENERAL INSTRUCTIONAL METHODS: Lecture, discussion, demonstration, exploration and discovery exercises with the use of visual aids, graphing calculators, and/or computer resources.

STANDARDS AND METHODS FOR EVALUATION:
Midterm and Final Exam will each account for 20% (40% total) of the course grade. Two tests will each count for 15% of the course grade. The remaining 30% of the course grade will be determined by the instructor. Non-proctored assessments may not account for more than 30% of the course grade. This must include 10% - 15% for in-class collaborative lab activities and 10% - 15% for other graded assessments.

GRADING SCALE:
Letter grades for the course will be awarded using the following scale:

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\geq 90\% - \text{A} \quad 80-89\% - \text{B} \quad 70-79\% - \text{C} \quad 60-69\% - \text{D} \quad < 60\% - \text{E}
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Grades will not be curved, skewed, or otherwise inflated.