

Information about STAT 1350

Updated 17 July 2022

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

Prerequisites: MATH 1025 with a “C” or better or placement into MATH 1075, or placement by ALEKS PPL, 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 one-sample 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 Skills

TEXTBOOK, MANUALS, REFERENCES, AND OTHER REQUIRED MATERIALS:

- The textbook and courseware (Achieve) for this course are required and both are being provided at a discounted rate through Blackboard via instant access. A digital e-book/ material fee will be included on your student tuition and fees statement. In addition to cost-savings, materials provided through instant access are available immediately. There is no need to wait for financial aid or scholarship money to purchase your textbook! This is a negotiated discount and the lowest cost option you will find for your course materials. You will not find a lower price online.
 - For more information about the program visit <https://www.csc.edu/services/bookstore/affordability-bookstore.shtml>.
 - If you would like a loose-leaf paper copy of the book in addition to the e-book, you can purchase that from the CSCC Bookstore. This is not included in the instant access fee.
- Texas Instruments’ TI-83, TI-83 PLUS, or TI-84 graphing 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:

Three exams will each account for 17-20% (51-60% total) of the course grade. 10-15% is for in-class collaborative lab activities. The remaining 25-39% of the course grade will be determined by the instructor.

STATEMENT ON PROCTORED ASSESSMENTS

All STAT 1350 departmental exams are proctored one of two ways:

- (1) Students taking the class in person or in a Blended format take the exams during class time and are proctored by the course instructor or a substitute instructor when needed.
- (2) Students taking Web classes are required to go to one of the CSCC Testing Centers or find an out-of-region testing location that is approved by the CSCC Testing Center in order to have their test proctored in-person.

Other assessments may also be proctored; a minimum of 60% of all STAT 1350 course points are from proctored assessments.

GRADING SCALE:

Letter grades for the course are earned using the following scale:

$$\geq 90\% = A \quad 80-89\% = B \quad 70-79\% = C \quad 60-69\% = D \quad < 60\% = E$$

Grades will not be curved, skewed, or otherwise inflated.