CATALOG DESCRIPTION

Introduces the student to the collection and analysis of numerical data. Covers descriptive statistics, measures of central tendency, probability, sampling distributions, estimation, hypothesis testing, and regression and correlation as they are apply to a wide variety of business decisions.

Prerequisites: RDNG-095 and MATH-115 or equivalent/higher.

Semester Offered: Fall and Spring

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in…

BROAD AND SPECIALIZED LEARNING

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION

Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

Course Learning Outcomes

Upon successful completion of the course, the student will be able to…

GENERAL LEARNING OBJECTIVES

1. Explore the usefulness of statistics as a descriptive and analytical tool.

2. Present the different variable types and measurement levels.
3. Illustrate the graphic techniques and numerical measures used to present statistical information.
4. Discuss the importance of predicting chance events (reducing uncertainty).
5. Explain the differences among common statistical distributions and the appropriate use of each.
6. Review the various sampling techniques.
7. Stress the implications of sample size.
8. Demonstrate the construction and testing of hypotheses.
9. Use regression analysis to build performance models.
10. Determine the strength of a relationship between variables using correlation analysis.

SPECIFIC LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to …

1. Describe data using both graphic presentations and numerical measures.
2. Calculate the probability of an event or series of events.
3. Design a survey or experiment to collect data necessary for a decision.
4. Choose an appropriate sampling technique and determine an appropriate sample size.
5. Determine the confidence level of a statistical estimate.
6. Construct and conduct both one- and two-sample tests of hypotheses.
7. Perform an analysis of variance.
8. Use linear and multiple regression to determine a relationship between variables.
9. Establish the degree of correlation between variables.
10. Conduct goodness-of-fit tests using the chi-square statistic.