SAN JUAN COLLEGE
Success Matters

BUSA 2130 BUSINESS STATISTICS 3 CREDITS

SYLLABUS

CATALOG DESCRIPTION

Use of statistics in business; techniques for describing and analyzing descriptive and numerical data; estimation, hypotheses testing, t-tests, and regression; application to business problems.

Prerequisites: ENGL-1110 or ENGL-1210 and MATH 1130 Survey of Mathematics, or MATH 1215 Intermediate Algebra, or Higher

Semester Offered: FALL

GENERAL EDUCATION STUDENT LEARNING OUTCOMES

In the New Mexico General Education Curriculum students take courses in a variety of content areas, which may include Communications, Mathematics, Science, Social and Behavioral Sciences, Humanities, and the Creative and Fine Arts. Specific course requirements depend on your program. All general education courses focus on at least three of these skills. Other courses may also develop these skills.

Through these courses, students develop five essential skills:

COMMUNICATION

QUANTITATIVE REASONING

CRITICAL THINKING

PERSONAL AND SOCIAL RESPONSIBILITY

INFORMATION AND DIGITAL LITERACY

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

PROGRAM LEARNING OUTCOMES

Upon successful completion of this program, students will be able to …

If this is a required course in a program, please add the program learning outcomes in this box. Otherwise, it can be deleted.

1. Examine and employ management and economic principles and concepts in making informed business decisions to continue business operations, and control the use of organizational resources to protect a business's fiscal well-being.

2. Demonstrate application of the tools, techniques, and systems that businesses use to create, communicate, and deliver value to customers and to manage customer relationships in ways that benefit the organization and its stakeholders.

3. Describe contemporary management tools, techniques, and strategies used in planning, organizing and controlling business resources of a department or small enterprise to maintain operations, growth, and development.

4. Apply the concepts, tools, and systems needed to select, obtain, evaluate, and disseminate relevant information for use in making business decisions.

5. Demonstrate use of leadership and management concepts and systems and personal and group interaction skills to obtain and convey information in the work place and to foster positive working relationships and accomplish organizational goals.

COURSE LEARNING OUTCOMES

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

General Learning Outcomes

1. Use descriptive statistics (graphic representation, numerical measures)
2. Apply basic probability concepts
3. Use both discrete and continuous probability distributions
4. Use the various sampling methods
5. Calculate point estimates and construct confidence intervals.
6. Conduct one-sample and two-sample tests of hypothesis
7. Develop a regression line and determine the strength of a correlation
8. Apply statistical analysis to decision-making
9. Use statistical software as available

Specific Learning Outcomes

A. Apply the basic concepts of statistical inference to support business decisions.
B. Describe the nature and implication of basic principles of statistics and how they play an important role in business operations.
C. Distinguish between categorical and numerical variables.
D. Distinguish between discrete and continuous numerical variables.
E. Explain how data is collected and the various sampling methods that can be used.
F. Describe data using both graphic presentations and numerical measures.
G. Organize data in electronic format, including original source data as well as summary tables, contingency tables or frequency distributions.
H. Construct the appropriate graphs for categorical and numeric variables contained in a data set.
I. Explain the basic properties of probability.
J. Calculate the probability of an event or series of events.
K. Determine the strength of a relationship between variables using correlation analysis.
L. Compute descriptive statistics for sets of data.
M. Demonstrate the construction and testing of hypotheses.
N. Construct and conduct both one- and two-sample tests of hypotheses.
O. Use regression analysis to examine relationships between variables.
P. Conduct goodness-of-fit tests using the chi-square statistic.
Q. Explain the Central Limit Theorem.
R. Explain the differences among common statistical distributions and the appropriate use of each.
S. Formulate confidence intervals for population means and proportions.
T. Perform an analysis of variance.
U. Select the correct distribution models for calculating discrete and continuous probabilities.