

COCONINO COMMUNITY COLLEGE
COURSE OUTLINE

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Revised by: Curriculum Committee/MAT 140
Status: Permanent
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December 4, 1991
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A. Course Identification:

1. Subject Area: Business (BUS)
2. Course Number: 232 SUN # BUS 2201
3. Course Title: Business Statistics and Analysis
4. Credit Hours: 3
5. Course Description: Business statistics includes the collection, tabulation, and analysis of business and economic data. Averages, dispersion, statistical inference, correlation and regression, and statistical decision making and problem solving. Prerequisite: MAT 140 or placement test scores beyond prerequisite course. General Education: Options. Three lecture.

B. Course Goals: To build student mastery and confidence in the use of fundamental principles and concepts of statistical analysis in relation to business. To develop problem solving skills that help students develop a positive attitude toward the use of statistics.

C. Course Outcomes: Students will:

1. use statistical methods to collect, organize, analyze and interpret numerical data;
2. create and interpret graphs of data;
3. calculate and use measures of central tendency and variability;
4. calculate probabilities for events or combinations of events;
5. predict the outcomes of an event;
6. explain and use the Central Limit Theorem;
7. estimate population parameters for one and two populations;
8. recognize a variety of probability distributions;
9. evaluate confidence intervals;
10. test hypotheses;
11. determine and interpret linear regression and correlation;
12. solve application situations using a variety of statistical methods;
13. and use technology to solve a variety of statistical applications.

D. Course Assessment will include:

1. instructor assigned reading and homework;
2. and comprehensive final exam.

E. Course Content will include:

1. introduction:
 - a. populations;
 - b. sample;
 - c. random variable;
 - d. parameter;
 - e. statistics;

- f. data collection methods;
- 2. descriptive statistics:
 - a. central tendency: mean, median, and mode;
 - b. variability: range, variance, and standard deviation;
 - c. graphs: bar, pie, frequency distribution, histogram, and ogiv;
- 3. probability:
 - a. event probability;
 - b. conditional probability;
 - c. mutually exclusive;
 - d. independence;
 - e. distributions: binomial and normal;
- 4. confidence interval estimate:
 - a. one population mean;
 - b. the difference of two population means;
- 5. hypothesis testing:
 - a. one population mean;
 - b. two population means;
 - c. chi-squared test for independence;
- 6. regression:
 - a. scatter diagram;
 - b. simple linear regression equation;
 - c. prediction of response variable;
- 7. correlation:
 - a. correlation coefficient;
 - b. interpretation of correlation;
 - c. test of correlation coefficient;
- 8. and applications in business.