NorthWest Arkansas Community College
Business & Computer Information Systems Division

Business Department Course Outline

BUTR 1033 Data Analysis and Interpretation (F, S)

Catalog Description:

This is an introductory level course covering topics involving estimation of population and sample characteristics, research design and hypothesis testing, as well as measuring and predicting relationships. The course should enable the students to develop an understanding regarding the application and interpretation of basic data analysis techniques with an emphasis on statistical applications.

Prerequisite:

MATH 2053 Finite Math with grade of "C" or better and computer competency requirement satisfied.

Credit Hours/Contact Hours/Load Hours:

3/3/3

Target Audience & Transfer:

Designed for students majoring in some area of business administration. This course is part of the core business requirements for all students planning to enter the Walton College of Business at the University of Arkansas.

Student Learning Outcomes:

Students completing this course will:

- Define statistic, parameter, and estimate.
- Describe the difference between experimental and non-experimental designs.
- Identify independent and dependent variables when given an applied problem.
- Calculate and interpret an observed significance level from an Excel printout to compare to the significance level.
- Interpret the results of a t-test performed in MS Excel.
- Calculate a correlation coefficient from a given dataset.
- Compute a regression equation from a given dataset.
- Formulate a hypothesis test when given an application problem.
- Choose between a one-tailed and two-tailed t-test, when given a hypothesis and a research design.

Topics:

- Basic graphing
- Central Limit Theorem
- t-distribution
- Confidence intervals
- Experimental design
- Hypothesis testing
- Significance levels
- Type I and Type II error
- Two sample t-tests
- Z tests

- Scatter diagrams
- Correlation
- Simple linear regression
- Multiple linear regression

Forms of Assessment:

Written exams, quizzes, projects, and exercises.

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