

SYLLABUS

DIVISION: Business and Engineering Technology

REVISED: Fall 2013

CURRICULA IN WHICH COURSE IS TAUGHT: Business Administration

COURSE NUMBER AND TITLE: BUS 227, Quantitative Methods

CREDIT HOURS: 3 HOURS/WK **LEC:** 3 HOURS/WK **LAB:** NA

I. CATALOG DESCRIPTION: Includes an overview of quantitative methods in business decision-making, simple and multiple regression and correlation analysis, time series analysis and business forecasting, decision analysis, linear programming, transportation and assignment methods, and network models. Includes computer applications.

II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES: As a required course for all students enrolled in Business Administration, BUS 227 will address the following DCC Business Administration program objectives.

- Calculate, compile, and analyze business data for problem solving.
- Demonstrate an awareness of appropriate current and emerging technologies to support business functions.
- Use verbal, non-verbal, and written communication skills effectively.
- Use critical thinking skills in problem analysis.

Students completing BUS 227 will demonstrate the ability to understand how statistical analysis applies to business practices and be familiar with the vocabulary and concepts associated with the content items listed in sections IV and VI.

III. REQUIRED BACKGROUND/PREREQUISITES:

MTH 163, Pre-calculus I, or Divisional Approval. If students have developmental requirements, MTE 1 through 9 must be completed prior to enrolling in BUS 227.

IV. COURSE CONTENT:

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| • Introduction to Statistics | • Simple Regression Analysis |
| • Graphical Representations | • Multiple Regression Analysis |
| • Time Series Analysis | • Index Numbers |
| • Business Forecasting | • Statistical Process Control |
| • Correlation Analysis | |

V. THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE ADDRESSED IN THIS COURSE
(Place X by all that apply)

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| <u>X</u> | Communication |
| <u>X</u> | Critical Thinking |
| — | Cultural and Social Understanding |
| — | Information Literacy |
| — | Personal Development |
| <u>X</u> | Quantitative Reasoning |
| — | Scientific Reasoning |

VI. LEARNER OUTCOMES**VII. EVALUATION**

<ul style="list-style-type: none">• Define statistics• Differentiate between a population and a sample• Differentiate between a parameter and a statistic• Construct a graphical representation of data	Written test Homework questions Research project
<ul style="list-style-type: none">• Compute and interpret descriptive measures of central location• Compute and interpret descriptive measures of central variability	Written test Homework questions Computer project
<ul style="list-style-type: none">• Understand the importance of time series analysis for business• Construct a time series analysis for a given set of data• Demonstrate the ability to forecast a dependent variable	Written test Homework questions Research project Computer project
<ul style="list-style-type: none">• Determine if variables correlate with one another• Interpret the coefficients of a regression model• Identify independent variables for a regression model and test their significance• Predict a value for the dependent variable when given a regression model	Written test Homework questions Class experiment Computer project
<ul style="list-style-type: none">• Compare and contrast a weighted and an unweighted index• Explain the Consumer Price Index statistic	Written test Homework questions Research project Computer project
<ul style="list-style-type: none">• Discuss the role of statistical process control• Define and construct a Pareto chart• Define and create a fishbone diagram	Written test Homework questions Group project Class experiment