SYLLABUS

DIVISION: Arts, Sciences, and Business **REVISED:** Spring 2020

CURRICULA IN WHICH COURSE IS TAUGHT: Business Administration

COURSE NUMBER AND TITLE: BUS 227, Business Analytics

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 broadly address all of the DCC business administration program objectives. DCC Business Administration graduates will demonstrate the ability to understand how statistical analysis applies to business practices. The students will be familiar with the vocabulary and concepts associated with the content items listed in sections IV and VI.

III. REQUIRED BACKGROUND/PREREQUISTIES:

- MTH 163, Precalculus I or Divisional Approval

IV. COURSE CONTENT:

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

V.THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE ADDRESSED IN THIS COURSE

_ Civic Engagement – The ability to contribute to the civic life and well-being of local, national, and global communities as both a social responsibility and a life-long learning process. Degree graduates will demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society.

X Critical Thinking – The ability to use information, ideas, and arguments from relevant perspectives to make sense of complex issues and solve problems. Degree graduates will locate, evaluate, interpret, and combine information to reach well-reasoned conclusions and solutions.

_ Professional Readiness – The ability to work well with others and display situationally and culturally appropriate demeanor and behavior. Degree graduates will demonstrate skills important for successful transition into the workplace and pursuit of further education.

X Quantitative Literacy – The ability to perform accurate calculations, interpret quantitative information, apply and analyze relevant numerical data, and use results to support

conclusions. Degree graduates will calculate, interpret, and use numerical and quantitative information in a variety of settings.

X Scientific Literacy – The ability to apply the scientific method and related concepts and principles to make informed decisions and engage with issues related to the natural, physical, and social world. Degree graduates will recognize and know how to use the scientific method, and to evaluate empirical information.

X Written Communication – The ability to develop, convey, and exchange ideas in writing, as appropriate to a given context and audience. Degree graduates will express themselves effectively in a variety of written forms.

VI. LEARNER OUTCOMES	VII. EVALUATION
Define statistics Differentiate between a population and a sample Differentiate between a parameter and a statistic Construct various graphical representations of data	Written test Homework questions Research project
Compute and interpret descriptive measures of central location Compute and interpret descriptive measures of central variability	Written test Homework questions Computer project
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
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 Construct a prediction model while testing its validity Predict a value for the dependent variable when given a regression model	Written test Homework questions Class experiment Computer project
Compare and contrast a weighted and an unweighted index Discuss the role of statistical process control Interpret Quality Management tools	Written test Homework questions Research project Computer project