

Course discipline/number/title: BUS 2212: Business and Economic Statistics

A. CATALOG DESCRIPTION

1. Credits: 4
2. Hours/Week: 4
3. Prerequisites (Course discipline/number): MATH 0094 or MATH 0098
4. Other requirements: None
5. MnTC Goals (if any): NA

B. COURSE DESCRIPTION: This course is an introduction and overview of business statistics. Topics will include descriptive statistics, probability, sampling methods, confidence intervals, one and two sample tests of hypothesis, analysis of variance, and linear regression. Statistical calculators and software will be used extensively throughout the class. Emphasis is on application of statistical techniques and procedures for solving business related problems, rather than mathematical theories.

C. DATE LAST REVISED (Month, year): February, 2025

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Business Applications of Statistics
2. Introduction to Data Analytic Tools
3. Data Collection and Sampling Techniques
4. Data Preparation and Cleaning
5. Data Visualization and Storytelling
6. Descriptive Statistics
7. Probability Distributions
8. Statistical Inference: Estimation and Hypothesis Testing
9. Introduction to General Linear Models
10. Time Series Analysis for Forecasting

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Use statistical procedures to transform business data into actionable insights and support decision-making across business functions.
2. Calculate and interpret measures of central tendency, dispersion, and expected values within the business contexts.
3. Create effective data visualizations to communicate statistical findings.
4. Apply discrete and continuous interval estimate using key properties of the appropriate sampling distribution.
5. Analyze relationships between variables using general liner models for informed business decisions.
6. Identify connections between basic statistics and business applications
7. Demonstrate ethical decision-making when applying and interpreting statistical data within the business context.
8. Utilize statistical analysis software programs to complete statistical problems.
9. Prepare and clean data sets for accurate statistical analysis
10. Apply time series analysis techniques to forecast business trends.

F. LEARNING OUTCOMES (MNTC): NA

G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:

1. Assignments and case problems
2. Group activities
3. Exams and quizzes

H. RCTC CORE OUTCOME(S). This course contributes to meeting the following RCTC Core Outcomes(s): **Critical Thinking.** Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.

I. **SPECIAL INFORMATION (if any):** None