Course Number and Name: STAT 2430 – Business Statistics
Credit Hours: 5 semester credits (4 lecture and 2 lab hours per week)
Prerequisite: A grade of “C” or higher in MATH 1131 or MATH 1151

DESCRIPTION OF COURSE
STAT 2430 is designed to acquaint students with statistical methods used in gathering and analyzing data. The course includes: designing samples and experiments; describing data with graphs and numerical summaries; correlation and regression; concepts in probability; probability distributions including the binomial, normal, uniform, exponential, and other continuous probability distributions; the Central Limit Theorem; confidence intervals and hypothesis testing for means and proportions; inference for comparing two populations; Chi-Square test of independence; and multiple linear regression. Applications in business, management, and economics are emphasized.

COURSE GOALS
• To master the major concepts and methods of analysis in probability and statistics.
• To apply concepts and methods to business, management, economics, and related areas.
• To develop competence in problem recognition, calculator computation, and interpretation of results.
• To use Minitab/Excel and the TI calculator as statistical tools.

GENERAL EDUCATION GOALS
This course addresses the following Columbus State general education goals:
• Critical Thinking
• Quantitative Skills

REQUIRED TEXTBOOK, CALCULATOR AND OTHER RESOURCES
• A graphing calculator is REQUIRED. The Texas Instruments' TI-84 (regular, Plus, Silver, etc.) graphing calculator is fully supported and approved for use during proctored assessments.

Calculator Alternatives: Some students may prefer to use a CASIO-FX-9750GII or a TI-83. These are less expensive options that are similar to the TI-84, and that are approved for use during proctored assessments. However, note that your instructor will primarily use the TI-84 when teaching, meaning that you will need to learn how to perform any necessary operations using these other calculators without your instructor’s help.

Other graphing calculators may be permitted. If you own a different calculator, please check with your instructors to see if your calculator will be allowed during their proctored assessments.
The TI-89 and TI-92 (or other calculators that perform symbolic manipulations) are never allowed during proctored assessments.

Your instructor may require that your graphing calculator’s memory be reset (all RAM cleared) prior to each proctored assessment.

The Columbus State Bookstore sells both the TI-84 and CASIO-FX-9750GII for your convenience. Additional resources supporting the use of the TI-84 and CASIO-FX-9750GII may be available at:

- **Minitab or Excel Software (REQUIRED).** This software is available in DH 104, 107, and off-campus computer labs.
- Tutoring is available in the Learning Resource Center. See http://www2.cscc.edu/academics/departments/math/tutoring.shtml for location and posted hours.

**INSTRUCTIONAL METHODS**
Instructional methods may include face-to-face or video lectures or demonstration, face-to-face or virtual discussion, individual or group activities including the use of visual aids, graphing calculators, computers and/or other technologies. Students may be expected to participate in these activities during class and/or outside of class. Instructors may require class participation, collaborative learning, and peer review.

**UNITS OF INSTRUCTION**
1. Data and Decisions (1.1-1.3)
2. Displaying and Describing Categorical Data (2.1-2.5)
3. Displaying and Describing Quantitative Data (3.1-3.9)
4. Correlation and Linear Regression (4.1-4.9)
5. Randomness and Probability (5.1-5.9)
6. Random Variables and Probability Models (6.1-6.5)
7. The Normal and Other Continuous Distributions (7.1-7.6)
8. Surveys and Sampling (8.1-8.5)
9. Sampling Distributions and Confidence Intervals for Proportions (9.1-9.4)
10. Testing Hypotheses about Proportions (10.1-10.6)
11. Confidence Intervals and Hypothesis Tests for Means (11.1-11.7)
12. More about Tests and Intervals (12.1-12.4)
15. Inference for Regression (15.1-15.4)
16. Multiple Regression (17.1-17.5)

**METHODS OF EVALUATION**
- Letter grades for the course will be awarded using a 90%-80%-70%-60% scale.
- A comprehensive Final Exam will account for 33% of the course grade.
• Minitab/Excel labs will account for 10% of the total course grade.