COLLEGEWIDE COURSE OUTLINE OF RECORD

BUS 230, BUSINESS STATISTICS

COURSE TITLE: Business Statistics
COURSE NUMBER: BUSN 230
PREREQUISITES: BUSN 101 Introduction to Business or INF 219 Business Intelligence, Data Warehousing, and Reporting and MATH 135 Finite Math or MATH 136 College Algebra or higher and BOAT 207 Integrated Microsoft Office Applications or BOAT 218 Microsoft Excel
SCHOOL: Business, Logistics, and Supply Chain
PROGRAM: Business Administration
CREDIT HOURS: 3
CONTACT HOURS: Lecture: 3
DATE OF THIS REVISION: Fall, 2013
EFFECTIVE DATE OF THIS REVISION: Fall, 2019

CATALOG DESCRIPTION: Designed to build student competence in the areas of descriptive and inferential statistics, through emphasis on the application of these statistical methods utilized in business. Includes an examination of data, probability of occurrence, and basic sampling processes. Uses statistical methods to model results and uses these models for forecasting. Tests to examine the appropriateness of these techniques are introduced.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

2. Calculate and interpret measures of central tendency (mode, median, mean) and dispersion.
3. Compute values of random variable, probability density function, expected value, and standard deviation of a binomial variable.
4. Calculate the mean and standard deviation of a given set of data.
5. Perform a Z-score conversion using tables of areas under the Standard Normal Curve to determine the probability a randomly selected score is below, between, or above certain values.
6. Calculate and analyze sampling distributions of the mean and standard error of the mean.
7. Construct confidence intervals of sample means and sample proportions.
8. Determine the probability of single, compound (joint), and conditional events.
9. Compute combinations and permutations.
10. Calculate and interpret results from linear regression as well as covariance and correlation analysis. Interpret the R² statistic and coefficients.
11. Perform various types of hypothesis testing (i.e., for large and small sample sizes).
12. Identify sampling techniques useful for business applications.
13. Create statistical calculations and distinguish among, and interpret tables (e.g. frequency distribution, relative frequency distribution) and graphs (e.g. pie chart, car chart, dot plot, histogram, scatter diagram, boxplot for different types of data (qualitative vs. quantitative).
14. Calculate probabilities for different types of probability distributions such as the binomial, uniform, discrete, and normal distributions.
15. Evaluate ethical issues involving the use of statistics in business.

COURSE CONTENT: Topical areas of study include –

Descriptive and interferential statistics
Measures of central tendency and dispersion
Categorical and numerical variables
Sampling distributions of the mean and standard error of the mean
Probability
Distributions: binomial, normal, Poisson
Correlation analysis
Coefficient of determination
Frequency distributions and graphs
Combinations and permutations
Central limit theorem
Null and alternative hypothesis
Type I and II errors
Hypothesis testing
Linear regression
Survey sampling

HOW TO ACCESS THE IVY TECH COMMUNITY COLLEGE LIBRARY:

The Ivy Tech Library is available to students on- and off-campus, offering full text journals and books and other resources essential for course assignments. Go to http://www.ivytech.edu/library/ and choose the link for your campus.

ATTENDANCE STATEMENT:

Students are expected to attend and participate regularly in class meetings, online learning activities and other activities assigned as a part of a course of instruction. Faculty are required to report student participation in compliance with institutional policies and federal financial aid guidelines. Faculty and staff shall be sensitive to students’ religious beliefs and observances, including an expectation that instructors make reasonable arrangements when a student must miss an exam or other academic exercise due to their religious observance. When notified in advance, and when possible, faculty will make allowances for students to make up missed work.
ACADEMIC HONESTY STATEMENT:

The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

Cheating on papers, tests or other academic works is a violation of College rules. No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials and other academic work. This includes students who aid and abet as well as those who attempt such behavior.

COPYRIGHT STATEMENT:

Students shall adhere to the laws governing the use of copyrighted materials. They must insure that their activities comply with fair use and in no way infringe on the copyright or other proprietary rights of others and that the materials used and developed at Ivy Tech Community College contain nothing unlawful, unethical, or libelous and do not constitute any violation of any right of privacy.

ADA STATEMENT:

Ivy Tech Community College seeks to provide reasonable accommodations for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, please contact the Office of Disability Support Services.

If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classroom.

Title IX STATEMENT:

Ivy Tech Community College is committed to providing all members of the College community with a learning and work environment free from sexual harassment and assault. Ivy Tech students have options for getting help if they have experienced sexual assault, relationship violence, sexual harassment or stalking. This information can be found at https://www.ivytech.edu/prevent-sexual-violence/index.html.

If students write or speak about having survived sexual violence, including rape, sexual assault, dating violence, domestic violence, or stalking, federal law and Ivy Tech policies require that instructors share this information with the Campus Title IX Coordinator. The Campus Title IX Coordinator will contact students to let them know about accommodations and support services at the College and in the community as well as options for holding accountable the person who harmed them. When contacted, students are not required to speak with the Campus Title IX Coordinator.

If students do not want the Title IX Coordinator notified, instead of disclosing this information to their
instructor, students can speak confidentially with certain individuals at the College or in the community. A list of these individuals can be found at https://www.ivytech.edu/prevent-sexual-violence/index.html under Confidential Employees and/or Community Resources.