MAT-268 STATISTICAL METHODS

COURSE DESCRIPTION: Statistical methods provides the student with a foundation in the techniques that underlie more advanced courses in statistics. Topics considered include descriptive statistics, sampling distributions, hypothesis testing and estimation for one and two populations, goodness-of-fit and contingency tables, analysis of variance, linear regression and correlation, and nonparametric statistics.

CREDITS/HOURS: 4 credits    4 hours

PREREQUISITE: MAT-160 with a grade of C or better or by permission of the Department Chair

GENERAL EDUCATION COURSE: No

STUDENT LEARNING OBJECTIVES:

1. Demonstrate comprehension of appropriate statistical terminology.
2. Create graphical displays of data and use the graphs to analyze the data.
3. Compute measures of dispersion, central tendency, and relative positions.
4. Use the Central Limit Theorem to construct and interpret a sampling distribution of sample means.
5. Analyze sample data in order to construct a confidence interval for one and two populations and make inferences based on the results.
6. Conduct a test of hypothesis to draw conclusions about the validity of a claim about one and two populations.
7. Create graphical displays of data and develop the simple linear regression model to make predictions from this data.
8. Demonstrate comprehension of the fundamentals of experimental design and develop the analysis of data collected from a completely randomized design using ANOVA.

ASSESSMENT MEASURES: Each of the above listed student learning objectives will be assessed by,

1. Written assignments and/or quizzes.
2. Written examinations
3. Other, as announced by the instructor

COURSE GRADE: Students should refer to the instructor’s grading policy which will be distributed during the first meeting of the class.

Customized for Bergen Community College
COURSE CONTENT:

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(see also note: 3 – 5 (optional))

REFERENCES:  
Larson and Farber, Elementary Statistics, Pearson/Prentice-Hall.  
Richmond, Statistical Inference, Ronald Press.  

ELECTRONIC DEVICES:  
The Department of Mathematics prohibits the use of cell-phones, PDA’s, laptops,  
headphones, IPODs and other such devices in mathematics classes unless  
otherwise specified in the grading policy provided by the instructor at the  
beginning of the semester.

FACULTY ABSENCE PROCEDURE:  
CLASS CANCELLATIONS may be found at http://www.bergen.edu/classcancellations.  
A list is also posted in a glass case near A-129, the main corridor on the first floor and  
in Ender Hall. If a cancelled class is not listed, it should be reported to the Department  
Office (A-327) or the Adjunct Office (C-107).

WEBSITE:  
Go to http://www.bergen.edu/academics/academic-divisions-departments/mathematics  
for more information regarding the Mathematics Department.

STUDENT SUPPORT SERVICES:  
Learning Assistance Center Room: L-125 879-7489  
Math and Science Walk-In Room: L-131 879-7489  
Office of Specialized Services Room: L-115 612-5269

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