

BERGEN COMMUNITY COLLEGE
DIVISION OF MATHEMATICS, SCIENCE AND TECHNOLOGY
DEPARTMENT OF MATHEMATICS
COURSE SYLLABUS

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:	<p>As a result of meeting the requirements for this course, students will be able to:</p> <ol style="list-style-type: none">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, <ol style="list-style-type: none">1. Written assignments and/or quizzes.2. Written examinations3. 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.
TEXTBOOK:	<u>Elementary Statistics</u> , Allan Bluman, 9 th Edition, McGraw Hill Publisher Customized for Bergen Community College

COURSE CONTENT:

<u>TOPIC</u>	<u>CHAPTER</u>	<u>SECTIONS</u>
Introduction to Statistics	1	1 - 4
Frequency Distributions and Graphs	2	1 - 3
Descriptive Statistics	3	1 - 3
The Normal Distribution and the Central Limit Theorem	6	1 - 4
Estimation of Parameters	7	1 - 4
Hypothesis Testing	8	1 - 6
Inferences for Two Populations	9	1 - 5
Linear Correlation and Regression	10	1 - 3
Goodness of Fit and Contingency Tables	11	1 - 2
Analysis of Variance	12	1 - 3
Nonparametric Statistics	13	1 - 2 3 - 5 (optional)

REFERENCES: Fanur, Mosteller, et al. Statistics: A Guide to the Unknown.
Larson and Farber, Elementary Statistics, Pearson/Prentice-Hall.
Richmond, Statistical Inference, Ronald Press.
Spiegel, Statistics, Schaum Publishing Co.
Weinberg and Schumaker, Statistics: An Intuitive Approach, Brooks/Cole.

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