Elementary Statistics (MAT 211)
Course Outline 2021-2022
Collegian Course through SUNY Ulster

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Textbook: Elementary Statistics, 12th edition by Mario F. Triola

Additional Materials: TI 84+ Graphing Calculator

Course Objectives: This course will introduce the basic concepts of statistics and probability which will include organizing, interpreting, and analyzing collections of data and statistical information. In addition, students should be able to infer certain conclusions given the data to be analyzed.

Student Learning Outcomes: Upon completion of the course, the student will demonstrate numeracy skills by being able to:

1. Use tables, graphs, and numerical measures to describe and analyze a data set.
2. Use probability to quantify the likelihood of a given event; calculate "mathematical expectation."
3. Construct and analyze a probability distribution and identify the distribution as binomial, normal, or otherwise; calculate and interpret the mean and standard deviation of a given distribution; calculate probability for a binomial and normal distribution.
4. Construct and interpret a confidence interval for a population parameter μ and p; determine sample size to guarantee a given maximum error.
5. Write a complete hypothesis test for claims about a population; write a complete conclusion and recognize the difference between statistically significant and chance fluctuation.
6. Give a complete linear correlation and regression analysis for a data set for two variables; apply and interpret the results.

Course Outline:

Chapter 1	Introduction to Statistics
Chapter 2	Summarizing and Graphing Data
Chapter 3	Statistics for Describing, Exploring, and Comparing Data
Chapter 4	Probability
Chapter 5	Discrete Probability Distributions
Chapter 6	Normal Probability Distributions
Chapter 7	Estimates and Sample Sizes
Chapter 8	Hypothesis Testing
Chapter 10	Correlation and Regression
Chapter 11	Goodness-of-Fit and Contingency Tables (if time permits)

Grading:

Final Exam (20%)
Unit Assessments (60%)
Homework (8%)
Quizzes (4%)
Projects (4%)
Effort & Participation (4%)

Attendance Policy: Every student is responsible to be in class and on time. It is the responsibility of the student to make up assignments and tests in a timely manner due to absences as outlined by the Saugerties High School attendance policy.

Homework: Homework is expected to be completed before each class. It is extremely important that you attempt the problems before each class and for this reason, quizzes may be based on the previous night's homework. I also reserve the right to check or collect the homework assignments to ensure completion and accuracy. Do not fall behind with your assignments!

Projects: The nature of the course is real-life applications of mathematics so projects will be assigned throughout the year. They will not be accepted late.

SUNY Ulster Math Department Grading Policy:
Students' final numeric averages will be converted to a letter grade for college credit at SUNY Ulster using the following grading policy.

Final Numeric Average	Letter Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
0-59	F