SYLLABUS

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Conference Hours	By Appointment

Course Name	Statistics
Course Number	547
Grade Level	12
Textbooks	Elementary Statistics: A Step by Step Approach Bluman – McGraw Hill
Resources	Online Textbook Resources
Required Materials	- textbook - composition notebook / notebook paper - pencils / pens - correction pen (optional) - ruler - graph paper - scientific / graphing calculator

Course Description:

Students completing the Statistics course would demonstrate mastery and understanding of the following:

Interpreting Categorical and Quantitative Data
- Summarize, represent, and interpret data on a single count or measurement variable.
- Summarize, represent, and interpret data on two categorical and quantitative variables.
- Interpret linear models.

Making Inferences and Justifying Conclusions
- Understand and evaluate random processes underlying statistical experiments.
- Make inferences and justify conclusions from sample surveys, experiments, and observational studies.

Conditional Probability and the Rules of Probability
- Understand independence and conditional probability and use them to interpret data.
- Use the rules of probability to compute probabilities of compound events in a uniform probability model.

Using Probability to Make Decisions
- Calculate expected values and use them to solve problems.
- Use probability to evaluate outcomes of decisions.

Mathematical Practices:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning

ESLRs Addressed

1a 1b 1c	2a 2b 2c	3a 3b 3c	4a 4b 4c	5a 5b 5c
Re-enter in the following boxes the designated ESLRs numbers, which are addressed by this course				
1a 1b 1c	2b	3a 3b 3c	4a 4b 4c	5b 5c

Content Standards

Statistics provides tools for describing variability in data and for making informed decisions that take it into account.

Data are gathered, displayed, summarized, examined, and interpreted to discover patterns and deviations from patterns. Quantitative data can be described in terms of key characteristics: measures of shape, center, and spread. The shape of a data distribution might be described as symmetric, skewed, flat, or bell shaped, and it might be summarized by a statistic measuring center (such as mean or median) and a statistic measuring spread (such as standard deviation or interquartile range). Different distributions can be compared numerically using these statistics or compared visually using plots. Knowledge of center and spread are not enough to describe a distribution. Which statistics to compare, which plots to use, and what the results of a comparison might mean, depend on the question to be investigated and the real-life actions to be taken.

Randomization has two important uses in drawing statistical conclusions.

- First, collecting data from a random sample of a population makes it possible to draw valid conclusions about the whole population, taking variability into account.
- Second, randomly assigning individuals to different treatments allows a fair comparison of the effectiveness of those treatments. A statistically significant outcome is one that is unlikely to be due to chance alone, and this can be evaluated only under the condition of randomness. The conditions under which data are collected are important in drawing conclusions from the data; in critically reviewing uses of statistics in public media and other reports, it is important to consider the study design, how the data were gathered, and the analyses employed as well as the data summaries and the conclusions drawn.

Random processes can be described mathematically by using a probability model: a list or description of the possible outcomes (the sample space), each of which is assigned a probability. In situations such as flipping a coin, rolling a number cube, or drawing a card, it might be reasonable to assume various outcomes are equally likely. In a probability model, sample points represent outcomes and combine to make up events; probabilities of events can be computed by applying the Addition and Multiplication Rules. Interpreting these probabilities relies on an understanding of independence and conditional probability, which can be approached through the analysis of two-way tables.

Technology plays an important role in statistics and probability by making it possible to generate plots, regression functions, and correlation coefficients, and to simulate many possible outcomes in a short amount of time.

Functions may be used to describe data; if the data suggest a linear relationship, the relationship can be modeled with a regression line, and its strength and direction can be expressed through a correlation coefficient.

Classroom Rules

Test / Quiz / Make Up Work

- Only excused absences will be allowed to make up tests, quizzes, or submit homework
- If the student needs to make up a test/quiz, a make up will be given in the office on the same day the student returns to school
- Upon returning to school after an absence, a student has the responsibility to meet with the teacher to develop a plan for making up missed work and/or examinations.

Important: If you are caught cheating or copying assignments, you and your partner will earn a score of zero and a possible detention.

Classroom Rules

1. Be on time for class and come prepared. Have all your materials ready.
2. No talking while teacher is talking. Raise your hand and wait to be called upon before speaking and do not interrupt others.
3. No eating in class. Only water is permitted.
4. Respect yourself, others and the environment. No writing or scratching on the desks, bulletin boards, walls, etc.
5. Positive remarks or comments only.
6. Carrying or using cell phones is not allowed during school hours.
   Cell phones must be turned off and stored in lockers or cars and may be used only after school

Note: School rules are to be followed at ALL times.

If the rules are not followed the following steps will be taken:

1st offence- Written or verbal warning from the teacher

2nd offence- Phone call to parent/guardian

3rd offence- Referral to administrator

*** **NOTE:** SOME OFFENCES WILL RESULT IN IMMEDIATE REFERRAL TO ADMINISTRATION***

Assessment Method

Test/Quiz Policy
Students take at least TWO tests and two quizzes per class or course per semi-quarter. Two to four quizzes may be counted as one test. It is up to the individual teacher to adopt a policy to drop the lowest test grade of a student in calculating the quarter grade. No more than two tests are scheduled on the same day. The test scheduled last will be automatically dropped.

Test/Quiz Make-Up
Students with **excused** absences shall have the opportunity to complete missed class work and make up all tests receiving full credit. The student is responsible to arrange for the make-up.

Students who miss a test/quiz because of an **unexcused** absence will receive a failing grade on that test/quiz, except when the teacher decides to offer the chance for make-up.

If a student misses a test/quiz while on suspension, he/she will not have the opportunity to make up the test/quiz and will receive an "F".

Cheating
Acts of cheating or plagiarism will result in suspension and the student will receive an "F" (20/100) on the test or the assigned work.

This section includes grade percent distribution and additional rules set by the teacher

Tests = 50%
Quizzes = 25%
Homework = 10%
Participation = 15 %

NOTE: For assigned projects, grades will count as part of Participation.