

Name of School:

Name of Course: Advanced Placement Statistics

Instructor Information

Name:

E-mail address:

School phone number:

Web page address:

Best times to be reached:

Course Description

This course introduces students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. It emphasizes sound statistical thinking rather than routine procedures. Students will be exposed to several broad conceptual themes of Statistics such as exploring data, planning a study, modeling and anticipating patterns, and statistical inference.

District Standards and Power Benchmarks

Data Analysis & Probability Standard: Understand and apply concepts of data analysis and probability.

1. Formulates questions that can be addressed with data and collects, organizes, and displays relevant data to answer them.
 - a. Understands methods of data collection
 - b. Plans and conducts surveys
 - c. Plans and conducts experiments
2. Selects and uses appropriate statistical methods to analyze data
 - a. Interprets graphical displays of distributions of univariate data
 - b. Interprets categorical data
 - c. Understands the Normal distribution
 - d. Understands sampling distributions
 - e. Summarizes distributions of univariate data
 - f. Compares distributions of univariate data
 - g. Analyzes bivariate data
 - h. Combines independent random variables
3. Develops and evaluates inferences and predictions that are based on data
 - a. Understands confidence intervals
 - b. Understands tests of significance
 - c. Applies inference to normally distributed data
4. Understands and applies concepts of probability
 - a. Understands probability as a relative frequency
 - b. Applies properties of probability

Communication Standard: Communicates and reasons mathematically

1. Expresses ideas using mathematical terms and representations
 - a. Uses statistical terms to describe various problems and situations
2. Uses tools (such as technology) to enhance mathematical learning
 - a. Uses the graphing calculator to explore data
 - b. Uses computer software to explore data

Course Information

Course length: Three terms
Credits: 1.5
Prerequisite: Algebra 2

Course Outline/Calendar

Term 1: Unit 1. Exploring and Understanding Data
Unit 2. Exploring Relationships Between Variables
Unit 3. Gathering Data - Understanding Randomness & Sample Surveys
Term 2: Unit 3. Gathering Data - Experiments
Unit 4. Randomness and Probability
Unit 5. From the Data at Hand to the World at Large
Term 3: Unit 6. Learning About the World
Unit 7. Inference when Variables are Related

Text/Other Required Materials/Resources

Title: Stats: Modeling the World
Authors: Bock, Velleman, and DeVeaux
Publisher: Pearson/Addison Wesley (2004)
Graphing Calculator strongly suggested.

Instructional Procedures & Support

Students are expected to bring all supplies to class every day including the textbook, a notebook, pencil and graphing calculator. Students are expected to participate in class discussions and in small group discussions. Written assignments will be given daily and should be completed before the next class period. Completion of assignments, reading the textbook, good attendance and punctuality are essential for success in this course.

Classroom Management Procedures

1. Students are expected to be in class and on time.
2. Students are allowed two hall-passes per term.

Assessment Plan

Group Labs/Assignments	15%
Quizzes/Tests	75%
Final Exam	10%

Grades will be posted periodically in the classroom by student number.

Grading System

Grades will be determined by the DCSD Grading Scale.

100-90	A
89-80	B
79-70	C
69-60	D
59-0	F