Course Title

Statistics A/B (AP)

Department

Math/RHS

Description of Target Groups

This course will be offered to college preparatory students who are interested in earning college credit.

Purpose

The purpose of Advanced Placement Statistics is to provide the student with a clear understanding of statistical techniques and to be able to apply those techniques to real life situations. This class is intended for students planning to pursue college degrees in Math, Science, or engineering areas of study. Course length is one year; total units is 10.

Prerequisites

Eligible students must have completed Algebra 2 with a "B" or better or a recommendation from instructor. All students are strongly recommended to have a TI 83 or equivalent graphing calculator.

Standards of Expected Student Achievement

Upon completion of this course students will be able to:

1. Analyze data using graphical and numerical techniques to study patterns and departures from patterns.
   - Interpreting graphical displays of distributions of univariate data.
   - Summarizing distributions of univariate data.
   - Comparing distributions of univariate data.
   - Exploring bivariate data.
   - Exploring categorical data.

2. Collect data in a well-developed plan.
   - Overview of methods of data collection.
   - Planning and conducting surveys.
   - Planning and conducting experiments.
   - Generalizability of results from observational studies, experimental studies, and surveys.

3. Use probability, as a tool for anticipating what the distribution of data should look like under a given model.
   - Probability as relative frequency.
   - Combining independent random variables.
   - The normal distribution.
   - Sampling distributions.

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    4. Select the appropriate models to make statistical inferences.
- Confidence intervals.
- Test of significance.
- Special case of normally distributed data.

Methods of Assessment of Student Learning

Tests/ Quizzes
Homework
Projects
Activities

Instructional Materials

Text and Supplementary materials

Refer to: <u>Secondary Adopted Texts and Approved Supplementary Books Used in the Santa Maria Joint Union School District</u>

TI 83 Graphing calculators are recommended for all students
TI 83 Graphing overhead calculator
Classroom set of TI 83 Graphing calculators will be used

Dedicated statistical software will be used in computer lab

Activities

Presentation determined by the methods and techniques of the instructor utilizing the following activities.

1. Individual work
2. Lectures
3. Class participation
4. Demonstrations
5. Audio-visual materials
6. Drills
7. Field trips
8. Small group activities
9. Outside resource people
10. AP Exam