



AP Statistics Syllabus

Ms. Andrejko Room# 604

623-445-7246 7th Hour Prep

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COURSE DESCRIPTION

AP Statistics is the high school equivalent of a one semester, introductory college statistics course. In this course, students develop strategies for collecting, organizing, analyzing, and drawing conclusions from data. Students design, administer, and tabulate results from surveys and experiments. Probability and simulations aid students in constructing models for chance behavior. Sampling distributions provide the logical structure for confidence intervals and hypothesis tests. Students use a TI-83/84 graphing calculator, Fathom and Minitab statistical software, and Web-based java applets to investigate statistical concepts. To develop effective statistical communication skills, students are required to prepare frequent written and oral analyses of real data.

COURSE GOALS

In AP Statistics, students are expected to learn

Skills

- To produce convincing oral and written statistical arguments, using appropriate terminology, in a variety of applied settings.
- When and how to use technology to aid them in solving statistical problems

Knowledge

- Essential techniques for producing data (surveys, experiments, observational studies), analyzing data (graphical & numerical summaries), modeling data (probability, random variables, sampling distributions), and drawing conclusions from data (inference procedures – confidence intervals and significance tests)

Habits of mind

- To become critical consumers of published statistical results by heightening their awareness of ways in which statistics can be improperly used to mislead, confuse, or distort the truth.

PRIMARY TEXTBOOK AND RESOURCE MATERIALS

Primary Textbook used in the course:

- [Statistics The Art and Science of Learning From Data](#) (2nd Edition), by Agresti and Franklin, Pearson Prentice Hall, 2009

The following texts and resources are used as supplements in the teaching of the course:

- [The Practice of Statistics](#) (4th edition), by Starnes, Yates, and Moore, W. H. Freeman & Co., 2010.
- Texas Instruments TI83+/84+ Graphing Calculators.
- Key Curriculum Press. *Fathom 2 Dynamic Data Software*.
- Instructor developed activities to illustrate and develop an understanding of statistical concepts.

COURSE OUTCOMES

Topical Outline for AP Statistics*

- Constructing and interpreting graphical displays of distributions of univariate data (dotplot, stemplot, histogram, cumulative frequency plot)
- Summarizing distributions of univariate data
- Comparing distributions of univariate data (dotplots, back-to-back stemplots, parallel boxplots) Exploring bivariate data
- Exploring categorical data
- Overview of methods of data collection
- Planning and conducting surveys
- Planning and conducting experiments

- Generalizability of results and types of conclusions that can be drawn from observational studies, experiments, and surveys
- Probability
- Interpreting probability, including long-run relative frequency interpretation
- Combining independent random variables
- The normal distribution
- Sampling distributions
- Estimation (point estimators and confidence intervals)
- Tests of significance

*Advanced Placement Course Description, The College Board

MATERIALS REQUIRED DAILY

- Notebook and folder or 3-ring binder
- Completed Assignments
- Colored pens or highlighters are recommended but optional

- **Graphing Calculator (TI-84)**

*****It will be very important to have a graphing calculator in this course. The TI-84 is preferred for statistics, but the TI-83 is also suitable*****

DAILY COURSE ACTIVITIES

The student will:

1. Participate in daily bell work.
2. Participate in team and individual activities.
3. Participate in class discussions.
4. Take notes or complete an in class activity.
5. Complete homework and sample problems.
6. Complete quizzes and exams.

EXPECTATIONS

The following rules encourage a positive learning environment, as all students have the right to learn without disruptions.

- Be **respectful** to yourself, others, and O'Connor at all times!
- Be **prepared** for class with the required materials (listed above).
- Keep a **positive** attitude at all times.
- Produce **quality** work and turn all work in **on time**. Do your **best** on everything!
- **Appropriate** language must be used at all times.

Violation of the expectations will result in a consequence appropriate for the specific behavior.

GRADING SYSTEM

Grades are cumulative for each semester. The grade book categories are as follows:

Assessments	72%
Homework/Formative	8%
Final Exam	20%

No extra credit will be accepted.

Grading Scale

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

POWERSCHOOL ACCESS

The Powerschools site allows parents/guardians and students to access the student's grades, attendance, and other information. If you need your access information, please stop by the front desk during business hours. You will need a photo I.D. The web address is: ps.dvusd.org/public

HOMEWORK ASSIGNMENTS

It is extremely important to practice each new concept that we learn. Therefore, it is essential that each student complete his or her regular assignments, as this is a key part to success in the course. All homework assignments will be due the day after they are assigned. **No late work is accepted unless it is due to an EXCUSED absence.** Homework is awarded 5 points per assignment for completeness. 1 problem for each homework assignment will be chosen at random and graded - up to 5 points per assignment will be awarded for accuracy. Each assignment will be worth a total of 10 points and **all work must be shown** to receive credit for the assignment.

MAKE-UP WORK

Upon return to class after an absence, a student has one school day for each day missed to make up work/test assigned during his/her absence regardless of the number of days absent. For example, if a student is absent on Thursday and Friday, he/she will have Monday and Tuesday of the following week to make up work and must turn in the work that was assigned during the days absent on Wednesday. It is the student's responsibility to check with teachers immediately upon return for work missed. Teachers may choose to schedule an appointment with the student to formulate a plan for the completion of make-up work.

Students can obtain the notes and assignments missed from the proper section on the course website: jandrejko.weebly.com

Coursework and assessments assigned prior to the absence(s) may still be due on the date assigned or due on the first day that the student returns to class.

Class work missed as a result of an unexcused absence will result in a zero for that day. This includes tests, quizzes, labs, projects, participation points, etc. done that day.

Make-up work for extended absences may be requested through the Counseling Office and picked up there.

LONG TERM PROJECT POLICY

Long term projects are due on the date and time assigned, as defined in writing in advance by the teacher. **NO EXCEPTIONS. THIS SUPERSEDES THE MAKE-UP POLICY.** If the student is absent or the class does not meet that day, the **PROJECT IS STILL DUE ON THE DAY ASSIGNED.**

LOSS OF CREDIT DUE TO ABSENCES

Upon reaching 5 unexcused absences or a combination of 12 unexcused and/or excused absences, a student may **lose credit** in any given class.

Any student may be placed on an Attendance Contract upon accumulating multiple excused and unexcused absences. Any student with excessive absences may:

1. Lose credit in one or more classes.
2. Lose parking privileges.

EXTRA HELP

It is important to get extra help as soon as possible. My goal is to help you be successful in this course. We will constantly be building on previous concepts that we have learned, so in order to be successful, you must seek help before you fall too far behind. You may visit my website to view a calendar of assignments and exams. Extra help hours can be found on my website.

TEST GRADE RECOVERY POLICY

Students must take tests on the given day. A graphing calculator will be required to complete many of the problems on the test, so it is essential that students arrive prepared with one.

Students will be allowed to recover a test grade by retaking any test throughout the semester given the following criteria:

- The student must have full homework completion points for the Chapter prior to the date of the test
- Student must attend at least one tutoring session with teacher prior to retaking the test grade
- The test grade must be retaken within ONE WEEK of time that the teacher returns the graded test to the student
- The score that the student earns will be the AVERAGE of the first test and the retake with a maximum score of 90%.
- Students may NOT retake the midterm or final exam
- Due to time constraints, students will not be able to retake the last chapter test of each semester (Ch. 6 and Ch.12)

ELECTRONIC DEVICE USE

Technology (cell phones, iPods, hand-held devices, etc.) use in the classroom is intended to **enhance** the learning environment for all students; however, any use of technology that substantially degrades the learning environment, promotes dishonesty or illegal activities, is prohibited. If the instructor determines that the use of technology is a distraction to the learning process, either of the student using the technology or to those around him/her, the student may, at the discretion of the teacher, be asked to discontinue the use of technology in the classroom.

Personal Electronic Device Use: Personal Electronic Devices include cell phones, iPods, other mp3 players and similar technology devices **used for entertainment and communication/social media**. Students are expected to refrain from the use of electronic devices for personal entertainment and/or communication (i.e email, instagram, facebook, etc.) during instructional time (as determined by the teacher or classroom designee). While students may freely use these devices before and after school, during passing period, and at lunch- the teacher will limit the use of personal devices and for which purposes during class to ensure that *all students are focused and ready to learn*.

Bring Your Own Device and Use of Electronic Devices to Facilitate Learning: Sandra Day O'Connor High School will begin to integrate the use of tablets, laptops and smart phones **as a learning tool** in the classroom. Once the technology tools are added to the classroom for learning, the classroom teacher will inform students as to when they may use their device and for which purposes. Students must adhere to their teacher's guidelines for use and appropriate times for use. Any student who violates the teacher's guidelines will be subject to disciplinary action.

Please note- students may not access their personal devices, whether for entertainment or learning, if the teacher has stated that the classroom activities at that time do not warrant use. For example, during testing or assessments.

PLAGIARISM AND CHEATING

Cheating: In cheating, a student is taking the work of another, on any assignment, and claiming it as his/her own. At SDOHS cheating includes but is not limited to:

- Copying and/or offering homework verbally, in written form, or by electronic means from/to another student.
- Copying and/or offering questions and/or answers on tests or quizzes verbally, in written form, or by electronic means from/to another student.
- Pressuring other students to copy and/or offer homework, answers and/or questions on tests or quizzes verbally, in written form or by electronic means.
- Bringing in and using unauthorized information during class time, including information stored in any electronic device.
- Offering or receiving information under circumstances in which information is not to be shared.
- Having anyone, including parents or tutors, complete assignments and submitting the work as one's own.
- Presenting collaborative work as independent work and independent work as collaborative. (In group work, one person should not and will not bear the burden for the entire group assignment.)
- Copying answers from answer guides in texts.
- Fabricating data, information, or sources. Presenting made up material as authentic.

Plagiarism: The act of plagiarism may include direct copying, but it may also be more complex than verbatim repetition. A student, in preparing a project for a class, will have plagiarized if he/she has taken information from sources without citing the sources that have been used. Plagiarized material may appear in a student's paper as word-for-word copying, a summation, or a paraphrase of another's ideas. A student has plagiarized whether the material from another source has been taken in whole or in part. In effect, by not naming the source, the student is claiming the work of another as his/hers. At SDOHS plagiarism includes but is not limited to:

- Submitting images and/or documents in whole or in part from the Internet without citation of the source(s).
- Copying another's work.
- Using another's ideas without proper citations.
- Incorporating portions of another's writing within the context of your own work.
- Failing to acknowledge a source of information.
- Using "unique" phrases without citations.
- Using graphics, charts, diagrams, or illustrations without citations.
- Using a translator (either in-person or on-line) without proper citations

Plagiarism and/or Cheating will result in disciplinary actions and a 0%, with no option to redo/retake. - **no exceptions.**

COMMUNICATION

Please contact the teacher for any student concerns. It is crucial that teachers, parents, and students maintain open lines of communication in order to ensure the best support for student success. Contact information is provided at the top of the first page of this syllabus.

The Deer Valley Unified School District does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities. For any inquiries regarding nondiscrimination policies contact the Superintendent's Department, 20402 N. 15th Avenue, Phoenix, AZ 85027. 623.445.5000.