

# AP Statistics- FALL 2022/ SPRING 2023

## Instructor Information:

**Instructor:** Scott Gorsuch

**Room:** 129

**Email:** [SGorsuch@Washoeschools.net](mailto:SGorsuch@Washoeschools.net) **Website:** [www.washoeschools.net/Page/7915](http://www.washoeschools.net/Page/7915) (please bookmark)

**Availability:** Mornings before school, lunch, after school by appointment

## Course Description:

This is a one-year course designed to offer formal Probability and Statistics course to those students wishing to study the topic at or on par with the university level. The major topics of study are Inferential and descriptive statistics, data collection and analysis, data distributions, probability, and one-and two- sample hypothesis testing. A graphing calculator is required for this course (A TI-83/84 plus is more than adequate, as in the INSPIRE). Students must take the Advanced Placement Statistics Test given in May in order to get AP credit.

## Course Pre/Co-requisites:

Successful completion of Formal Geometry or higher; students must have the desire and discipline to study mathematics at a rigorous, college level pace.

## Required texts, course materials:

Materials to be brought every day to class:

- Graphing Calculator – A TI-84 Plus (CE is OK) is recommended. The math department has a limited supply of calculators that students will be allowed to check out.
- Textbook (The Practice of Statistics, 6<sup>th</sup> edition, copyright 2018 by Starnes, Tabor, Yates, and Moore)
- Barron's Review text (semester 2). Normal school supplies to organize and take notes.

## Grading Criteria, Scale, and Standards:

DRHS/WCSD grading scale:

A: 90% - 100%

B: 80% - 89.9%

C: 70% - 79.9%

D: 60% - 69.9%

F: <59.9%

## Category Weights/Policies:

Type	%	Policy
Assignments	10%	<b>Homework</b> will be assigned daily. Students are expected to attempt and check all (odd) answers in the back of the book to ensure accuracy. Q/A will be held daily for problems. Students should expect to spend around 1-1.5 hours reading the textbook, working on assignments, and studying. Some assignments could be online. Assignments turned in late will be given half credit.
Quizzes	10%	<b>Individual Quizzes</b> may be given at any time to assess understanding. <b>Group quizzes</b> are utilized for chapter review before individual tests. You should be prepared for either type on any given day by keeping up with the assignments and reading.
Tests	60%	There will (generally) be one test/chapter, and each test is worth approximately 100 points. <b>PLEASE NOTE: Please come to class prepared for all tests. Test retakes are generally not allowed in this AP class.</b>
Final Exam	20%	A final <b>exam</b> will be given at the end of the semester. The second semester final will likely mimic an AP Exam. A summary project after the AP Test is possible.

## Make-Up Work

- Make-up work is defined as scheduled tests, scheduled quizzes, homework assigned on the day the student was absent, and/or a description of the topic(s) covered in class while the student was absent and possible resources where the student can obtain information on the topic(s).
- It is the responsibility of the student to request make-up work after returning from an absence and return the completed work within the designated deadline.
- Students are provided the length of the absence plus one day to complete any make-up work assigned. For example, if the student was absent for four days, they will have five days to complete and submit the make-up work.
- Students who do not request or return completed make-up will not earn credit on missed assignments.
- Make-up work need not be identical or equivalent to that missed due to the absence but will ensure that the student has an opportunity to meet the academic standards.
- **Previously assigned work that was due on the day the student was absent is NOT considered makeup work and is due the day the student returns to school.**
- The teacher must provide make-up work to the student within 2 days of the student's request.

## Student Learning Outcomes:

*(copied from <https://apcentral.collegeboard.org/pdf/ap-statistics-course-description.pdf?course=ap-statistics>)*

The topics for AP Statistics are divided into four major themes: exploratory analysis (20–30 percent of the exam), planning and conducting a study (10–15 percent of the exam), probability (20–30 percent of the exam), and statistical inference (30–40 percent of the exam).

- I. Exploratory analysis of data makes use of graphical and numerical techniques to study patterns and departures from patterns. In examining distributions of data, students should be able to detect important characteristics, such as shape, location, variability and unusual values. From careful observations of patterns in data, students can generate conjectures about relationships among variables. The notion of how one variable may be associated with another permeates almost all of statistics, from simple comparisons of proportions through linear regression. The difference between association and causation must accompany this conceptual development throughout. © 2010 The College Board. Visit the College Board on the Web: [www.collegeboard.com](http://www.collegeboard.com).
- III. Data must be collected according to a well-developed plan if valid information is to be obtained. If data are to be collected to provide an answer to a question of interest, a careful plan must be developed. Both the type of analysis that is appropriate and the nature of conclusions that can be drawn from that analysis depend in a critical way on how the data was collected. Collecting data in a reasonable way, through either sampling or experimentation, is an essential step in the data analysis process.
- III. Probability is the tool used for anticipating what the distribution of data should look like under a given model. Random phenomena are not haphazard: they display an order that emerges only in the long run and is described by a distribution. The mathematical description of variation is central to statistics. The probability required for statistical inference is not primarily axiomatic or combinatorial but is oriented toward using probability distributions to describe data.
- IV. Statistical inference guides the selection of appropriate models. Models and data interact in statistical work: models are used to draw conclusions from data, while the data are allowed to criticize and even falsify the model through inferential and diagnostic methods. Inference from data can be thought of as the process of selecting a reasonable model, including a statement in probability language, of how confident one can be about the selection.

## 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.

# Damonte Ranch High School/WCSD Policies

## Academic Integrity:

Cheating means gaining unfair advantage by using unauthorized information.

Cheating is further defined by but not limited to:

- **COPYING** someone else’s homework, classwork, or test answers
- **ALLOWING** someone else to copy your work or test answers
- **USING** any kind of unauthorized device, study aid, or cheat sheet
- **POSSESSING** or **VIEWING** a copy of an exam beforehand
- **SHARING** test information with students who have not yet taken the test or course
  - o This includes taking answers/questions from a test out of the classroom without the permission of the teacher.
- **CHANGING** your answers or someone else’s when correcting in class
- **MISREPRESENTING** work done by others as your own work.

Plagiarism is presenting the words or ideas of another person as one’s own without citing sources.

- **YOU ARE PLAGIARIZING** when you copy a phrase, a paragraph, a page or an entire paper.
- **YOU ARE PLAGIARIZING** when you copy from a published source, i.e. Internet or print.
- **YOU ARE PLAGIARIZING** when you copy from someone else’s work.

Minimum consequences for cheating are as follows:

- Student will receive a **ZERO** on the test or homework assignment
- **REFERRAL** to Student Services
- **PARENT CONTACT** by the teacher
- **NOTATION** made in school discipline record
- Student may receive an **“F”** in citizenship for the quarter and/or semester
- Alternative assignment, to be determined by the teacher

**Be Responsible. Make Wise Choices. If you are unsure, ask your teacher for guidance.**

- **As part of taking this Advanced Placement (AP) class, students will be required to set up an online account with the College Board (the company that oversees the AP Program), if they don’t already have one. With a College Board account, students can access AP curriculum supports, SAT and AP scores, and send them to colleges. Additionally, an account lets students manage personal college lists, save scholarship searches, compare costs at colleges of interest, and more. When setting up the account, students will need to use a personal email address to have access to the account long term, since their WCSD email address will no longer be active after the student graduates. They will also need to supply the College Board with identifying information such as full name, email address, high school name, year of graduation, and home address. You can access the College Board Terms and Conditions here: <https://about.collegeboard.org/site-terms> and their Privacy Policy here: <https://about.collegeboard.org/privacy-policy>. By signing below, I acknowledge the foregoing account requirements and consent to my student registering for an online account with the College Board using the foregoing required information.**

### **YOU WILL FILL OUT A FORM ON TEAMS TO ACKNOWLEDGE RECEIPT AND READING OF THIS SYLLABUS**

Cut and return this lower portion to your teacher by the next class meeting.

“I have read the Damonte Ranch High School Academic Integrity Policy.”

“I have read the AP Statistics Syllabus.”

“I understand I need to sign up for a college board account and join the course code \_\_\_\_\_”

Circle one: YES or NO

\_\_\_\_\_  
Student Name (printed)

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date

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Parent Name (printed)

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Parent Signature

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Date