CVHS AP STATISTICS SYLLABUS 2020-2021

Teacher: James Barnes
Email: jbarnes2@houstonisd.org
Office Hours: 12:20 – 1:05 daily

Welcome to AP Statistics! AP Statistics is an exciting course dealing with collecting, analyzing, and drawing conclusions from data. The course is broken into four main conceptual themes:

1. Sampling and Experimentation: Planning and conducting a study
2. Exploring Data: Describing patterns and departures from patterns
3. Anticipating Patterns: Exploring random phenomena using probability and simulation
4. Statistical Inference: Estimating population parameters and testing hypotheses

We will discuss all these themes throughout the course, sometimes individually and sometimes in combination. The course will build throughout the year until we are using all the concepts together to discuss real world data. The course is broken into large units with each chapter in the text representing a smaller chunk of that unit.

Course Materials

Primary Textbook

Stats: Modeling the World, 4th Edition by Bock, Velleman, and DeVeaux
This is an excellent textbook containing the entire AP Statistics curriculum. The book is not like any other Math textbook you have ever read; it is easy to read and very descriptive. You will read every chapter in the book and have many problem assignments from the book or the online homework system. It is extremely important to read the sections we are working on before coming to class to help you learn the concepts. This is an online textbook – you will be given instructions to gain access in class; these instructions will also be posted on the HUB. You will log in at www.mymathlabforschool.com

Statcrunch online statistical software

We will do some activities and analyze some data sets using the online statistical package www.statcrunch.com. Students will have access to this program using their login for the online textbook.

TI-84 Plus graphing Calculators

The entire course makes use of a graphing calculator with a Statistics package. You will use these on homework, quizzes, and tests. Calculators will be provided in class (you must present a student ID to borrow one), but they cannot be taken home. It would be very helpful to have your own calculator to use on homework assignments.   Use of the calculator is crucial to success on many in class assessments and on the AP Exam, so students are expected to make themselves comfortable with the calculator.

College Board Curriculum Documents

All College Board documents related to AP Statistics can be found at
https://apcentral.collegeboard.org/courses/ap-statistics/course
Students are expected to register for AP Classroom and will have assignments in AP Classroom throughout the year.

Grading Policy:

Grades will be computed using a weighted grading scale. The number of assignments in each category may vary from cycle to cycle, but the final grade will always be computed in the same manner:

Major Grades: 80%
Minor Grades: 20%

Major Grades:

Major grades could be tests, quizzes, or projects. Tests and quizzes could be either multiple choice, free response, or a combination thereof.

Major Grade Retake Policy:

Each student may retake up to 2 major grades (except projects) on which they received a failing grade each grading cycle. The retake will be an alternate assessment on the same content and the highest grade to be entered into the grade book for a retake is 70. Students must request by emailing Mr. Barnes within 24 hours of receiving back the assignment. The retake will be scheduled during SSEP or lunch within one week.

Minor Grades:

Minor grades could be homework assignments or assignments completed during class. These assignments will always be posted in the HUB and will be submitted either through the HUB, the online textbook, or AP Classroom.

Late Work

Assignments may be turned in late up to 2 school days after the due date. The maximum grade for a late assignment is a 70. After 2 school days late work will not be accepted.

Cheating:

The Carnegie Vanguard Honor Code states that **students may not give or received unauthorized aid on any assignment or exam.** In AP Statistics, this depends on the type of assignment.

- For homework assignments students may work together to discuss and answer problems, consult their textbook or other resource, and ask other people (such as teachers or tutors) for help. Cheating on a homework assignment is defined as copying the answers to that assignment from another student or the back of the book.
- For projects students may consult other students in their group (for a group project only) or Mr. Barnes for help. Cheating on a project is defined as copying any or all of the project from another student, group, or another source (including online sources), or having another person complete the assignment for you.
- For free response and multiple choice assessments, students may use an AP Statistics formula chart and a calculator, but nothing else. Cheating on a free response or multiple choice assessment is defined as copying from another student or an outside source, using a phone or computer to access any materials related to the assessment, or discussing questions from the assessment with other students before all students have completed the assessment.

If a student cheats on an assignment, they will receive a 0 for the grade on that assignment (with no opportunity to retake the assignment), their parent/guardian will be contacted, and they will be referred to the administration.

Scope and Sequence:

Cycle 1
Chapter 1 – Stats Starts Here
Chapter 2 – Displaying and Describing Categorical Data
Chapter 3 – Displaying and Describing Quantitative Data
Chapter 4 – Understanding and Comparing Distributions
Chapter 5 – The Standard Deviation as a Ruler and the Normal Model
Chapter 6 – Scatterplots, Association, and Correlation
Chapter 7 – Linear Regression

Cycle 2
Chapter 8 – Regression Wisdom
Chapter 9 – Re-expressing Data: Get It Straight!
Chapter 10 – Understanding Randomness
Chapter 11 – Sample Surveys
Chapter 12 – Experiments and Observational Studies
Chapter 13 – From Randomness to Probability
Chapter 14 – Probability Rules

Cycle 3
Chapter 15 – Random Variables
Chapter 16 – Probability Models
Chapter 17 – Sampling Distribution Models
Review Chapters 1-17
Semester 1 Final Exams

Cycle 4
Chapter 18 – Confidence Intervals for Proportions
Chapter 19 – Testing Hypotheses About Proportions
Chapter 20 – More About Tests and Intervals
Chapter 21 – Comparing Two Proportions
Chapter 22 – Inferences About Means
Chapter 23 – Comparing Means

Cycle 5
Chapter 24 – Paired Samples and Blocks
Chapter 25 – Comparing Counts
Chapter 26 – Inference for Regression
Review for AP Exam

Cycle 6
Review For AP Exam
AP Exam 5/13/2021 in the afternoon
Miscellaneous extension topics
Semester 2 Final Exams