

AP Statistics Curriculum Map

Month	Content	Skill	Standards
Sept	<p>Chapter 1: Exploring Data <i>Displaying distributions with graphs and displaying distributions with numbers.</i></p> <p>Chapter 2: The Normal Distribution <i>Density Curves and the Normal Distribution</i></p>	<p>-Students will understand the importance of reading, writing and technology in the course.</p> <p>-Students will be able to classify a variable as categorical or quantitative and choose appropriate displays for each type of data.</p> <p>-Students will be able to read and interpret different types of graphical and numerical displays.</p> <p>-Students will be able to choose and interpret measures of central tendency.</p> <p>-Students will recognize when to standardize values and calculate z-scores.</p> <p>-Students will be able to interpret the z-score and illustrate it in a normal curve.</p>	<p>4.1.12 A 4.1.12 B 4.3.12 A 4.3.12 C 4.4.12 A</p>
Oct	<p>Chapter 3: Examining Relationships <i>Scatter plots, Correlation, Least-Squares Regression</i></p> <p>Chapter 4: More on Two-Variable Data. <i>Transforming relationships, Cautions about correlation and regression and relations in categorical Data.</i></p>	<p>-Students will create a scatter plot by hand and with technology.</p> <p>-Students will recognize patterns, describe and draw conclusions about a scatter plot.</p> <p>-Students will distinguish between correlation and causation.</p> <p>-Students will use linear regression to describe the relationship between two variables</p> <p>-Students will use logarithmic transformations to transform exponential data.</p> <p>-Students recognize that the regression line and the correlation coefficient are highly influenced by outliers.</p>	<p>4.1.12 A 4.1.12 B 4.2.12 A 4.2.12 B 4.2.12 C 4.2.12 E</p>
Nov	<p>Chapter 5: Producing Data <i>Designing Samples Designing Experiments Simulating Experiments</i></p>	<p>-Students will recognize the difference between an observational study and an experiment.</p> <p>-Students will recognize bias.</p> <p>-Students will recognize different types of sampling and use a Simple Random Sample to collect data.</p> <p>-Students will use the elements of a good</p>	<p>4.1.12 A 4.1.12 B</p>

AP Statistics Curriculum Map

		<p>experimental or observational study design to run one of their own.</p> <ul style="list-style-type: none"> -Students will incorporate blocking and randomization in their experimental design. -Students will simulate experiments with a table of random integers or randomint function on their calculator. 	
Dec	<p>Chapter 6: Probability <i>The Idea of Probability, Probability Models, General Probability Rules</i></p> <p>Chapter 7: Random Variables <i>Discrete and continuous random Variables, means and variances of random variables.</i></p>	<ul style="list-style-type: none"> -Students will know to apply the rules of probability to specific situations. -Students will incorporate the use of union, intersection and conditional probability to specific situations. -Students will know how to use conditional probability in situations of chance and probability. -Students will distinguish between discrete and continuous random variables and find their means, standard deviations and variances. -Students will know when and how to draw a probability distribution table and answer questions from it. 	<p>4.1.12 A 4.1.12 B</p>
Jan	<p>Chapter 8: The Binomial and Geometric Distributions <i>The Binomial Distribution The Geometric Distribution</i></p> <p>Chapter 9: Sampling Distributions <i>Sampling Distributions Sample Proportions Sample means</i></p>	<ul style="list-style-type: none"> -Students will distinguish between the binomial and geometric distributions. -Students will use technology and the formula to calculate binomial and geometric probabilities. -Students will be able to calculate the mean, standard deviation and variance of each distribution. -Students will distinguish between symbols and terminology to use for samples and populations. -Students will understand how a sample size affects variability. -Students will find the probability of sample proportions and means. 	<p>4.1.12 A 4.1.12 B</p>

AP Statistics Curriculum Map

Feb	<p>Chapter 10: Introduction to Inference <i>Estimating with confidence, tests of significance, making sense of statistical significance and inference as decision.</i></p>	<p>-Students will understand the meaning of statistical confidence and significance. -Students will learn the formal steps to answer questions based on AP standards. -Students will make conclusions from their p-values of one-sided and two-sided tests. -Students will use an appropriate sample size to obtain a specified confidence interval and margin of error.</p>	<p>4.1.12 A 4.1.12 B 4.1.12 C 4.2.12 D</p>
Mar	<p>Chapter 11: Inference for Distributions <i>Inference for means of a population, comparing two means</i></p> <p>Chapter 12: Inference for Proportions <i>Inference for a population proportion, comparing two proportions.</i></p>	<p>-Students will be able to state the null and alternative hypothesis for testing means, proportions and comparing two means and proportions. -Students will be able to calculate a specified confidence interval for testing means, proportions and comparing two means and proportions. -Students will understand that if they do not reject the null hypothesis that does not mean they have accepted it. -Students will distinguish between type I and type II errors and the power of hypothesis testing.</p>	<p>4.1.12 A 4.1.12 B 4.1.12 C 4.2.12 D</p>
April	<p>Chapter 13: Inference for Tables: Chi-Square Procedures. <i>Test for Goodness of Fit, Inference for Two-Way tables.</i></p> <p>Chapter 14: Inference for Regression <i>Inference about the model, predictions and conditions.</i></p>	<p>-Students will learn the formal steps and propose of a goodness of fit test. -Students will construct a model for the chi-square test for homogeneity and chi-square test of association/independence. -Students will understand the concept of degrees of freedom. -Students will create the standard error and a confidence interval for the least squares regression line.</p>	<p>4.1.12 A 4.1.12 B 4.1.12 C 4.2.12 D</p>
May/June	<p>AP Exam</p> <p>Post Exam Projects</p>	<p>-Students will create a cumulative project using the main ideas that they have learned throughout the year.</p>	<p>4.1.12-4.4.12</p> <p>4.4.12 A</p>

AP Statistics Curriculum Map

		-Students will pick a research topic of interest and perform an experiment or observational study. -Students will present the material to the class.	4.4.12 B 4.4.12 C 4.4.12 D
--	--	---	----------------------------------