SAMPLE SYLLABUS #2

AP® Statistics

Curricular Requirements

CR1	Students and teachers have access to a college-level statistics textbook or resource in print or electronic format.	*See page:* 2
CR2	The course provides opportunities for students to interpret standard computer output and use approved graphing calculators with statistical computational capabilities to describe data, determine probabilities, and perform tests.	*See page:* 2
CR3	The course provides opportunities to develop student understanding of the required content outlined in each unit described in the AP® Course and Exam Description (CED).	*See page:* 2
CR4	The course provides opportunities for students to develop the skills related to Statistical Practice 1: Formulate Questions, as outlined in the CED.	*See page:* 3
CR5	The course provides opportunities for students to develop the skills related to Statistical Practice 2: Collect Data, as outlined in the CED.	*See page:* 3
CR6	The course provides opportunities for students to develop the skills related to Statistical Practice 3: Analyze Data, as outlined in the CED.	*See page:* 3
CR7	The course provides opportunities for students to develop the course skills related to Statistical Practice 4: Interpret Results, as outlined in the CED.	*See page:* 4

AP Statistics
Sample Syllabus #2

Curricular Requirement 1

Students and teachers have access to a college-level statistics textbook or resource in print or electronic format.

Textbook provided on the AP Course Audit form. CR1

Supplementary Materials:

- *Math Medic*, by Wilcox. 2025.
- *Skew the Script*, by Young-Saver. 2025
- *Stats: Modeling the World*, 6th edition, by Bock, Bullard, Velleman, and De Veaux. 2023.

Curricular Requirement 2 CR2

The course provides opportunities for students to interpret standard computer output and use approved graphing calculators with statistical computational capabilities to describe data, determine probabilities, and perform tests.

Standard Computer Output

Summaries of univariate and bivariate data are frequently presented using standard computer output in classwork, homework, and tests. Stapplet will be used to generate computer output from in-class lab activities. The course textbook includes computer output in many of its exercises. Students must be able to correctly select and interpret the values in the computer output.

Graphing Calculators

All students have access to a handheld graphing calculator for classwork, homework, and tests.

Examples of graphing calculator use:

- Example 1: Unit 2 Project. Students analyze a set of bivariate data that they find on the internet or that they generate themselves. They use a graphing calculator to: make a scatterplot and residual plot, write the equation of the LSRL and use it to make predictions, find and interpret *a, b, r, s* and r^2.
- Example 2: Graphing calculators are used to find the mean and standard deviation of discrete random variables, to calculate binomial probabilities, and to find normal model probabilities for continuous random variables.

Curricular Requirement 3 CR3

The course provides opportunities to develop student understanding of the required content outlined in each unit described in the AP® Course and Exam Description (CED).

Unit 1: Exploring One-Variable Data and Collecting Data

- Unit 2: Probability, Random Variables, and Probability Distributions
- Unit 3: Inference for Quantitative Data: Proportions
- Unit 4: Inference for Quantitative Data: Means
- Unit 5: Regression Analysis

CR2
The syllabus must include a brief description of one or more classroom activities, assignments, or projects in which students interpret standard computer output in at least one topic.

AND

The syllabus must include a brief description of one or more classroom activities, assignments, or projects in which students use approved graphing calculators in at least one topic.

Note: Approved graphing calculators are outlined in the AP® Exams Calculator Policy. Throughout the school year, students may use the web-based or app-based Desmos graphing calculator in place of or in addition to a handheld graphing calculator.

CR3
The syllabus must include an outline of course content by unit title or topic using any organizational approach to demonstrate the inclusion of required course content.

Note: If the syllabus demonstrates a different approach than the unit outline in the fall 2026 CED, the syllabus must indicate where the required content of each unit in the CED will be taught.

Curricular Requirement 4 CR4

The course provides opportunities for students to develop the skills related to Statistical Practice 1: Formulate Questions, as outlined in the CED.

Example 1: Students are presented with large, real-world data sets from popular areas of interest (for example, salary and performance statistics from professional sports teams). In collaborative groups, students write investigative questions that could be answered with the data set (**Skill 1.A**).

Example 2: In the weeks leading up to the AP Exam, students write a proposal for a study that they will conduct after the AP Exam. In the proposal, students choose a topic they are interested in and formulate an investigative question (**Skill 1.A**). Students list the variables they need to answer their question, describe their data collection procedure, identify the statistical analysis method that will help them answer their question, and discuss the types of conclusions they'll be able to draw from their study. In the weeks after the AP Exam, students conduct their study and present their methods and findings to their classmates.

CR4
The syllabus must include a brief description of one or more classroom activities, assignments, or projects in which students determine an investigative question for a statistical study to demonstrate a skill from Statistical Practice 1.

Note: The activity, assignment, or project must be labeled with the corresponding skill.

Curricular Requirement 5 CR5

The course provides opportunities for students to develop the skills related to Statistical Practice 2: Collect Data, as outlined in the CED.

Example 1: Throughout the inference units, students are given descriptions of statistical studies and are asked to identify the Type I and Type II errors, describe their consequences, and suggest ways to reduce the probabilities of such errors (**Skill 2.D**).

Example 2: During the introduction to hypothesis tests, students are given descriptions of statistical studies involving proportions, means, and other statistics, and are asked to write the appropriate hypotheses for the scenario (**Skill 2.E**).

CR5
The syllabus must include a brief description of one or more classroom activities, assignments, or projects in which students identify and justify methods for collecting data to demonstrate a skill from Statistical Practice 2.

Note: The activity, assignment, or project must be labeled with the corresponding skill(s).

Curricular Requirement 6 CR6

The course provides opportunities for students to develop the skills related to Statistical Practice 3: Analyze Data, as outlined in the CED.

Example 1: Students collect numerical data and calculate the mean and median and contribute the results to the class data set. Students then work in groups to create graphs of their choosing (**Skill 3.A**) to compare the distribution of means to the distribution of medians. They also write a complete comparison of the two distributions, including summary statistics and noting where their own statistic is located in each distribution (**Skill 3.B**).

Example 2: Students are given a description of a card game that has four possible outcomes (payouts). In collaborative groups, students decide if it would be profitable to play the game many times and work to justify their answer mathematically. By the end of the collaborative work and ensuing whole-class discussion, students develop the formula for calculating the mean and standard deviation of a discrete random variable (**Skill 3.D**).

CR6
The syllabus must include a brief description of one or more classroom activities, assignments, or projects in which students construct representations of data and calculate numerical statistical outputs to demonstrate a skill from Statistical Practice 3.

Note: The activity, assignment, or project must be labeled with the corresponding skill(s).

Curricular Requirement 7 CR7

The course provides opportunities for students to develop the course skills related to Statistical Practice 4: Interpret Results, as outlined in the CED.

Example 1: Students work in small groups to analyze the data provided in a voter registration activity. Students construct a segmented bar graph and mosaic plot from a two-way table and compare the distributions of age across three different groups (**Skill 4.A**). The students then perform a chi-square test for independence to evaluate whether there is statistical evidence of an association between age and the three different groups in the dataset (**Skills 2.E, 4.D, 4.E, 4.F, 4.G**).

Example 2: Students are given a set of study descriptions consisting of different inference procedures. Over the course of two class periods, students work in collaborative groups to select the appropriate inference procedure, check the conditions for that procedure, and draw a conclusion based on their statistical calculations (**Skills 2.C, 2.E, 3.E, 4.D, 4.E, 4.F, 4.G**).

CR7

The syllabus must include a description of one or more classroom activities, assignments, or projects in which students interpret results and justify conclusions with statistical inference procedures and methods to demonstrate skill 4.E, 4.F, or 4.G.

Note: The activity, assignment, or project must be labeled so that the corresponding skill(s) are evident.