Course at a Glance

Plan

The Course at a Glance provides a useful visual organization of the AP Statistics curricular components, including:

- Sequence of units, along with approximate weighting and suggested pacing. Please note, pacing is based on 45-minute class periods, meeting five days each week for a full academic year.
- Progression of topics within each unit
- Spiraling of the big ideas and course skills across units

Teach

SKILL CATEGORIES
Skill categories spiral throughout the course.

1	Selecting Statistical Methods	**3**	Using Probability and Simulation
2	Data Analysis	**4**	Statistical Argumentation

+ Indicates 3 or more skills for a given topic. See the individual topic for all the relevant skills.

BIG IDEAS
Big ideas spiral across topics and units.

VAR	Variation and Distribution	**DAT**	Data-Based Predictions, Decisions, and Conclusions
UNC	Patterns and Uncertainty		

Assess

Assign the Personal Progress Checks—either as homework or in class—for each unit. Each Personal Progress Check contains formative multiple-choice and free-response questions. The feedback from the Personal Progress Checks shows students the areas where they need to focus.

UNIT 1 — Exploring One-Variable Data

~14–16 Class Periods | **15–23%** AP Exam Weighting

Skill		Topic
VAR 1	1.1	Introducing Statistics: What Can We Learn from Data?
VAR 2	1.2	The Language of Variation: Variables
UNC 2	1.3	Representing a Categorical Variable with Tables
UNC 2	1.4	Representing a Categorical Variable with Graphs
UNC 2	1.5	Representing a Quantitative Variable with Graphs
UNC 2	1.6	Describing the Distribution of a Quantitative Variable
UNC 2 4	1.7	Summary Statistics for a Quantitative Variable
UNC 2	1.8	Graphical Representations of Summary Statistics
UNC 2	1.9	Comparing Distributions of a Quantitative Variable
VAR 2 3	1.10	The Normal Distribution

Personal Progress Check 1

Multiple-choice: ~35 questions
Free-response: 2 questions
- Exploring Data
- Exploring Data

UNIT 2 — Exploring Two-Variable Data

~10–11 Class Periods | **5–7%** AP Exam Weighting

Skill		Topic
VAR 1	2.1	Introducing Statistics: Are Variables Related?
UNC 2	2.2	Representing Two Categorical Variables
UNC 2	2.3	Statistics for Two Categorical Variables
UNC **DAT** 2	2.4	Representing the Relationship Between Two Quantitative Variables
DAT 2 4	2.5	Correlation
DAT 2	2.6	Linear Regression Models
DAT 2	2.7	Residuals
DAT 2 4	2.8	Least Squares Regression
DAT 2	2.9	Analyzing Departures from Linearity

Personal Progress Check 2

Multiple-choice: ~35 questions
Free-response: 2 questions
- Exploring Data
- Investigative Task

UNIT 3 — Collecting Data

~9–10 Class Periods | **12–15%** AP Exam Weighting

VAR 1	3.1	Introducing Statistics: Do the Data We Collected Tell the Truth?
DAT 1 4	3.2	Introduction to Planning a Study
DAT 1	3.3	Random Sampling and Data Collection
DAT 1	3.4	Potential Problems with Sampling
VAR 1	3.5	Introduction to Experimental Design
VAR 1	3.6	Selecting an Experimental Design
VAR 4	3.7	Inference and Experiments

UNIT 4 — Probability, Random Variables, and Probability Distributions

~18–20 Class Periods | **10–20%** AP Exam Weighting

VAR 1	4.1	Introducing Statistics: Random and Non-Random Patterns?
UNC 3	4.2	Estimating Probabilities Using Simulation
VAR 3 4	4.3	Introduction to Probability
VAR 4	4.4	Mutually Exclusive Events
VAR 3	4.5	Conditional Probability
VAR 3	4.6	Independent Events and Unions of Events
VAR 2 4	4.7	Introduction to Random Variables and Probability Distributions
VAR 3 4	4.8	Mean and Standard Deviation of Random Variables
VAR 3	4.9	Combining Random Variables
UNC 3	4.10	Introduction to the Binomial Distribution
UNC 3 4	4.11	Parameters for a Binomial Distribution
UNC 3 4	4.12	The Geometric Distribution

UNIT 5 — Sampling Distributions

~10–12 Class Periods | **7–12%** AP Exam Weighting

VAR 1	5.1	Introducing Statistics: Why Is My Sample Not Like Yours?
VAR 3	5.2	The Normal Distribution, Revisited
UNC 3	5.3	The Central Limit Theorem
UNC 4 3	5.4	Biased and Unbiased Point Estimates
VAR 3 4	5.5	Sampling Distributions for Sample Proportions
UNC 3 4	5.6	Sampling Distributions for Differences in Sample Proportions
UNC 3 4	5.7	Sampling Distributions for Sample Means
UNC 3 4	5.8	Sampling Distributions for Differences in Sample Means

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Personal Progress Check 3

Multiple-choice: ~20 questions
Free-response: 2 questions
- Exploring Data and Collecting Data
- Collecting Data

Personal Progress Check 4

Multiple-choice: ~45 questions
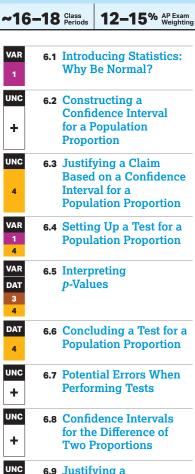**Free-response: 2 questions**
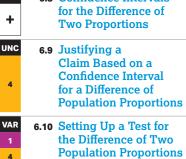- Probability
- Investigative Task

Personal Progress Check 5

Multiple-choice: ~35 questions
Free-response: 2 questions
- Probability and Sampling Distributions
- Investigative Task

UNIT 6 — Inference for Categorical Data: Proportions

~16–18 Class Periods | 12–15% AP Exam Weighting

VAR 1	6.1	Introducing Statistics: Why Be Normal?
UNC +	6.2	Constructing a Confidence Interval for a Population Proportion
UNC 4	6.3	Justifying a Claim Based on a Confidence Interval for a Population Proportion
VAR 1 / 4	6.4	Setting Up a Test for a Population Proportion
VAR DAT 3 / 4	6.5	Interpreting p-Values
DAT 4	6.6	Concluding a Test for a Population Proportion
UNC +	6.7	Potential Errors When Performing Tests
UNC +	6.8	Confidence Intervals for the Difference of Two Proportions
UNC 4	6.9	Justifying a Claim Based on a Confidence Interval for a Difference of Population Proportions
VAR 1 / 4	6.10	Setting Up a Test for the Difference of Two Population Proportions
VAR DAT 3 / 4	6.11	Carrying Out a Test for the Difference of Two Population Proportions

Personal Progress Check 6

Multiple-choice: ~55 questions
Free-response: 2 questions
- Inference
- Investigative Task

UNIT 7 — Inference for Quantitative Data: Means

~14–16 Class Periods | 10–18% AP Exam Weighting

VAR 1	7.1	Introducing Statistics: Should I Worry About Error?
VAR UNC +	7.2	Constructing a Confidence Interval for a Population Mean
UNC 4	7.3	Justifying a Claim About a Population Mean Based on a Confidence Interval
VAR 1 / 4	7.4	Setting Up a Test for a Population Mean
VAR DAT 3 / 4	7.5	Carrying Out a Test for a Population Mean
UNC +	7.6	Confidence Intervals for the Difference of Two Means
UNC 4	7.7	Justifying a Claim About the Difference of Two Means Based on a Confidence Interval
VAR 1 / 4	7.8	Setting Up a Test for the Difference of Two Population Means
VAR DAT 3 / 4	7.9	Carrying Out a Test for the Difference of Two Population Means
	7.10	Skills Focus: Selecting, Implementing, and Communicating Inference Procedures

Personal Progress Check 7

Multiple-choice: ~50 questions
Free-response: 2 questions
- Inference and Collecting Data
- Investigative Task

UNIT 8 — Inference for Categorical Data: Chi-Square

~10–11 Class Periods | 2–5% AP Exam Weighting

VAR 1	8.1	Introducing Statistics: Are My Results Unexpected?
VAR +	8.2	Setting Up a Chi-Square Goodness of Fit Test
VAR DAT 3 / 4	8.3	Carrying Out a Chi-Square Test for Goodness of Fit
VAR 3	8.4	Expected Counts in Two-Way Tables
VAR 1 / 4	8.5	Setting Up a Chi-Square Test for Homogeneity or Independence
VAR DAT 3 / 4	8.6	Carrying Out a Chi-Square Test for Homogeneity or Independence
	8.7	Skills Focus: Selecting an Appropriate Inference Procedure for Categorical Data

Personal Progress Check 8

Multiple-choice: ~30 questions
Free-response: 2 questions
- Inference
- Inference and Exploring Data/ Collecting Data

~7–8 Class Periods	**2–5%** AP Exam Weighting

Personal Progress Check 9

Multiple-choice: ~25 questions
Free-response: 1 question
- Inference and Exploring Data