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
- 2 Data Analysis
- 3 Using Probability and Simulation
- 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
- UNC Patterns and Uncertainty
- DAT Data-Based Predictions, Decisions, and Conclusions

UNIT 1 Exploring One-Variable Data

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

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

UNIT 2 Exploring Two-Variable Data

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

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

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

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

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

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

UNIT 9 Inference for Quantitative Data: Slopes

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

VAR 1	9.1 Introducing Statistics: Do Those Points Align?
UNC +	9.2 Confidence Intervals for the Slope of a Regression Model
UNC 4	9.3 Justifying a Claim About the Slope of a Regression Model Based on a Confidence Interval
VAR 1 4	9.4 Setting Up a Test for the Slope of a Regression Model
VAR DAT 3 4	9.5 Carrying Out a Test for the Slope of a Regression Model
	9.6 Skills Focus: Selecting an Appropriate Inference Procedure

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