Course at a Glance

Plan

The course at a glance provides a useful visual organization of the AP Physics C: Electricity and Magnetism curricular components, including:

- Sequence of units, along with approximate weighting and suggested pacing. Please note, pacing options are provided for teaching the course in a single semester or a full year.
- Progression of topics within each unit.
- Spiraling of the big ideas and science practices across units.

Teach

SCIENCE PRACTICES

Science practices are spiraled throughout the course.

1 Visual Representations
2 Question and Method
3 Representing Data and Phenomena
4 Data Analysis
5 Theoretical Relationships
6 Mathematical Routines
7 Argumentation

\+ Indicates 3 or more skills/practices suggested for a given topic. The individual topic page will show all the suggested skills.

BIG IDEAS

Big Ideas spiral across topics and units.

CHG Change
FIE Fields
ACT Force Interactions
CNV Conservation

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 Electrostatics

~20/~40 Class Periods | **26–34%** AP Exam Weighting

ACT 1 6	1.1	Electrostatics: Charge and Coulomb's Law
FIE +	1.2	Electrostatics: Electric Field and Electric Potential
CNV +	1.3	Electrostatics: Electric Potential Due to Point Charges and Uniform Fields
CNV 1 5	1.4	Electrostatics: Gauss's Law
CNV 6 7	1.5	Electrostatics: Fields and Potentials of Other Charge Distributions

Personal Progress Check 1

Multiple-Choice: ~35 questions
Free-Response: 1 question

UNIT 2 Conductors, Capacitors, Dielectrics

~9/~18 Class Periods | **14–17%** AP Exam Weighting

ACT +	2.1	Conductors, Capacitors, Dielectrics: Electrostatics with Conductors
CNV +	2.2	Conductors, Capacitors, Dielectrics: Capacitors
FIE +	2.3	Conductors, Capacitors, Dielectrics: Dielectrics

Personal Progress Check 2

Multiple-Choice: ~30 questions
Free-Response: 1 question

UNIT 3 Electric Circuits

~13/~26 Class Periods | 17–23% AP Exam Weighting

- FIE + — 3.1 Electric Circuits: Current and Resistance
- CNV + — 3.2 Electric Circuits: Current, Resistance, and Power
- CNV + — 3.3 Electric Currents: Steady-State Direct-Current Circuits with Batteries and Resistors Only
- CNV + — 3.4 Electrostatics: Gauss's Law

Personal Progress Check 3

Multiple-Choice: ~35 questions
Free-Response: 1 question

UNIT 4 Magnetic Fields

~13/~26 Class Periods | 17–23% AP Exam Weighting

- CHG + — 4.1 Magnetic Fields: Forces on Moving Charges in Magnetic Fields
- FIE + — 4.2 Magnetic Fields: Forces on Current Carrying Wires in Magnetic Fields
- FIE + — 4.3 Magnetic Fields: Fields of Long Current Carrying Wires
- CNV 5 7 — 4.4 Magnetic Fields: Biot–Savart Law and Ampère's Law

Personal Progress Check 4

Multiple-Choice: ~30 questions
Free-Response: 1 question

UNIT 5 Electromagnetism

~10/~20 Class Periods | 14–20% AP Exam Weighting

- FIE CNV ACT + — 5.1 Electromagnetism: Electromagnetic Induction (Including Faraday's Law and Lenz's Law)
- CNV + — 5.2 Electromagnetism: Inductance (Including LR circuits)
- CNV + — 5.3 Electromagnetism: Maxwell's Equations

Personal Progress Check 5

Multiple-Choice: ~25 questions
Free-Response: 1 question