

AP PHYSICS C ELECTRICITY & MAGNETISM SCOPE AND SEQUENCE

Semester 1

Unit 1: Electrostatics (September)

(Charge characteristics, field, and potential, Coulomb and Gauss' Law, Distributions)

Unit 2: Conductors, Capacitors, Dielectrics (October-November)

(Electrostatics with Capacitors, Types of Capacitors, Dielectric Properties)

Unit 3: Electric Circuits (November-December)

(Current, Resistance, Power, RC Circuits, Circuits with Capacitors)

Semester 2

Unit 4: Magnetic Fields (January-February)

(Forces on charges and wires in a magnetic field, Fields of current carrying wires, Biot-Savart's and Ampere's laws)

Unit 5: Electromagnetism (February-March)

(Induction, Faraday's and Lenz's Laws, Inductance, Maxwell equations)

Unit 6: AP Exam Lab Topic Prep (March-April)

(Prepare for the Advanced Placement Exam laboratory design and problem format)

Unit 7: AP Exam Review (April-May)

(Prepare for the Advanced Placement Exam)