

AP PHYSICS C MECHANICS SCOPE AND SEQUENCE

Semester 1

Unit 1: Measurement/Kinematics/Projectile Motion (September)

(Sig figs, distance/displacement, speed/velocity, acceleration)

Unit 2: Projectile Motion (September)

(Vectors, Components, Analysis of Motion Quantities)

Unit 3: Force (October)

(Newton's Laws, Inertia, Net Force, Friction, Incline, Coupled Motion)

Unit 4: Centripetal and Gravitational Motion (October-November)

(Center-Seeking Motion, Tangential Velocity, Newton's Law of Gravitation)

Unit 5: Energy, Work, Power (November-December)

(Conservation and Conversion of Energy, Work conditions, Power, Efficiency)

Semester 2

Unit 6: Momentum (January-February)

(Elastic and Inelastic Momentum, Impulse, Newton's Second Law)

Unit 7: Torque and Rotational Motion (February-March)

(Equilibrium, Net Force and Torque, Moment Arm, Angular Kinematics)

Unit 8: Oscillations and Gravitation (March)

(Charge characteristics, field, and quantity, Force between charges, Electric Field)

Unit 9: AP Exam Lab Topic Prep (March-April)

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

Unit 10: AP Exam Review (April-May)

(Prepare for the Advanced Placement Exam)