

Course at a Glance

Plan

The course at a glance provides a useful visual organization of the AP Physics C: Mechanics 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 skills across units

Teach

SCIENCE PRACTICES

Science practices are spiraled throughout the course.

- | | |
|--|------------------------------------|
| 1 Visual Representations | 4 Data Analysis |
| 2 Question and Method | 5 Theoretical Relationships |
| 3 Representing Data and Phenomena | 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.

- | | |
|-------------------------------|-------------------------|
| CHA Change | FLD Fields |
| INT Force Interactions | CON 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 Kinematics

~11/~22 Class Periods | 14–20% AP Exam Weighting

CHA **+** 1.1 Kinematics: Motion in One Dimension

CHA **+** 1.2 Kinematics: Motion in Two Dimensions

UNIT 2 Newton's Laws of Motion

~12/~24 Class Periods | 17–23% AP Exam Weighting

INT **+** 2.1 Newton's Laws of Motion: First and Second Law

INT **+** 2.2 Circular Motion

INT **+** 2.3 Newton's Laws of Motion: Third Law

Personal Progress Check 1

Multiple-choice: ~15 questions
Free-response: 1 question

Personal Progress Check 2

Multiple-choice: ~25 questions
Free-response: 1 question

**UNIT
3****Work, Energy,
and Power****~10/~20** Class
Periods**14-17%** AP Exam
Weighting

INT 2 7	3.1 Work-Energy Theorem
CON +	3.2 Force and Potential Energy
CON +	3.3 Conservation of Energy
CON 5	3.4 Power

Personal Progress Check 3Multiple-choice: ~20 questions
Free-response: 1 question**UNIT
4****Systems of
Particles and
Linear Momentum****~10/~20** Class
Periods**14-17%** AP Exam
Weighting

CHA 6	4.1 Center of Mass
INT +	4.2 Impulse and Momentum
CON +	4.3 Conservation of Linear Momentum, Collisions

Personal Progress Check 4Multiple-choice: ~15 questions
Free-response: 1 question**UNIT
5****Rotation****~10/~20** Class
Periods**14-20%** AP Exam
Weighting

INT 2 3	5.1 Torque and Rotational Statics
CHA 5 6	5.2 Rotational Kinematics
INT +	5.3 Rotational Dynamics and Energy
CON +	5.4 Angular Momentum and Its Conservation

Personal Progress Check 5Multiple-choice: ~20 questions
Free-response: 1 question

UNIT
6

Oscillations

~5/~10

Class
Periods

6-14% AP Exam
Weighting

INT

+

6.1 Simple Harmonic Motion, Springs, and Pendulums

UNIT
7

Gravitation

~5/~10

Class
Periods

6-14% AP Exam
Weighting

FLD

+

7.1 Gravitational Forces

CON

+

7.2 Orbits of Planets and Satellites

Personal Progress Check 6

Multiple-choice: ~10 questions
Free-response: 1 question

Personal Progress Check 7

Multiple-choice: ~10 questions
Free-response: 1 question