

# 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.

- |  |                                    |
|--|------------------------------------|
| <b>1</b> Visual Representations          | <b>4</b> Data Analysis             |
| <b>2</b> Question and Method             | <b>5</b> Theoretical Relationships |
| <b>3</b> Representing Data and Phenomena | <b>6</b> Mathematical Routines     |
|  | <b>7</b> 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.

- |                               |                         |
|-------------------------------|-------------------------|
| <b>CHA</b> Change             | <b>FLD</b> Fields       |
| <b>INT</b> Force Interactions | <b>CON</b> 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

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

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

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

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

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

**Personal Progress Check 5**Multiple-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