

Standards-Based Education Priority Standards

AP Physics C (Mechanics and EM)

The following standards are based on the BIG IDEAS (BI) and SCIENCE PRACTICES (SP) stated in the AP Physics C Exam Descriptions.

- PS 1 SP 1: Visual Representations: Students will analyze and or use [non-narrative/non-mathematical] representations of physical situations, excluding graphs. (<u>AP C MECH Course Description</u> and <u>AP C EM Course</u> <u>Description</u>)
- PS 2 SP2: Question and Method: Students will determine scientific questions and methods. (AP C MECH Course Description and AP C EM Course Description)
- PS 3 SP3: Representing Data and Phenomena: Students will create visual representations or models of physical situations. (<u>AP C MECH Course</u> <u>Description</u> and <u>AP C EM Course Description</u>)
- PS 4 SP4: Data Analysis: Students will analyze quantitative data represented in graphs. (<u>AP C MECH Course Description</u> and <u>AP C EM Course Description</u>)
- PS 5 SP5: Theoretical Relationships: Students will determine the effects on a quantity when another quantity or the physical situation changes. (<u>AP C MECH</u> <u>Course Description</u> and <u>AP C EM Course Description</u>)
- PS 6 SP6: Mathematical Routines: Students will solve problems of physical situations using mathematical relationships. (<u>AP C MECH Course Description</u> and <u>AP C EM Course Description</u>)
- PS 7 SP7: Argumentation: Students will develop an explanation or scientific argument. (<u>AP C MECH Course Description</u> and <u>AP C EM Course Description</u>)
- PS 8 BI1: Change: Students will understand that interactions produce changes in motion. (AP C MECH Course Description and AP C EM Course Description)
- PS 9 BI2: Force Interactions: Students will understand that forces characterize interactions between objects and systems. (<u>AP C MECH Course Description</u> and <u>AP C EM Course Description</u>)



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- PS 10 BI3: Fields: Students will understand that fields predict and describe interactions. (<u>AP C MECH Course Description</u> and <u>AP C EM Course Description</u>)
- PS 11 BI4: Conservation: Students will understand that conservation laws constrain interactions. (<u>AP C MECH Course Description</u> and <u>AP C EM Course</u> <u>Description</u>)