



MHS Course Proposal

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AP Physics C: Mechanics - Proposal

Course: AP Physics C: Mechanics

Semester: Full Year, Double Block

Grade(s): 11 & 12

Credits: 1.5

Prerequisite: Concurrent Calculus

Description: AP Physics C: Mechanics is a calculus-based, college-level physics course, especially appropriate for students planning to specialize or major in one of the physical sciences or engineering. Students cultivate their understanding of physics through classroom study, in-class activity, and hands-on, inquiry-based laboratory work as they explore concepts like change, force interactions, fields, and conservation.



Rationale

Students can take AP Physics C: Mechanics in tandem with Calculus, allowing them to learn how to use calculus in physics. Colleges and universities can choose to count this AP course credit toward STEM majors.



AP Physics C is Very Similar to AP Physics 1



AP Physics 1 Units (Algebra Based)

Unit 1: Kinematics
Unit 2: Force and Translational Dynamics
Unit 3: Work, Energy, and Power
Unit 4: Linear Momentum
Unit 5: Torque and Rotational Dynamics
Unit 6: Energy and Momentum of Rotating Systems
Unit 7: Oscillations
Unit 8: Fluids

AP Physics C: Mechanics Units (Calculus Based)

Unit 1: Kinematics
Unit 2: Force and Translational Dynamics
Unit 3: Work, Energy, and Power
Unit 4: Linear Momentum
Unit 5: Torque and Rotational Dynamics
Unit 6: Energy and Momentum of Rotating Systems
Unit 7: Oscillations

Additional Information

Benefits:

- More student selection
- Application of higher level mathematics: can help students improve their mathematical skills
- More in line with collegiate science courses for science majors

Possible Challenges:

- Cost to train a teacher in course-no teachers are currently trained to teach
- Potential low enrollment: training money wasted
- Cuts number of students signing up for AP Physics 1
 - Could potentially cause scheduling issues with other courses

