

## Weston High School Science Course Pathway Proposal: 2019-2020

As seen in the *Science Department Program Sequence* below, there are a multitude of course options available to students once they have completed Biology in ninth grade and Chemistry in tenth grade.

<b>9<sup>th</sup> Grade</b>	Biology	Honors Biology Honors Science Research
<b>10<sup>th</sup> Grade</b>	Chemistry	Honors Chemistry Honors Science Research
<b>11<sup>th</sup> &amp; 12<sup>th</sup> Grade</b>	Physics Environmental Science  Science Semester Electives: <i>-Forensics</i> <i>-Human Anatomy &amp; Physiology</i> <i>-Animal Behavior</i>	Honors Physics AP Physics I AP Physics C: Mechanics AP Biology AP Chemistry AP Environmental Science Honors Science Research  Science Semester Electives: <i>-Forensics</i> <i>-Human Anatomy &amp; Physiology</i> <i>-Animal Behavior</i>

A non-traditional course based on the curriculum of **AP Physics- C: Electricity and Magnetism** was formally added to the course sequence for 2018-2019 and had been offered in years prior. However, very low enrollment numbers each year (ranging from zero to two students) as well as contractual and budgetary constraints has made it a severe challenge to continue its implementation. **The elimination of this advanced physics course is not expected to limit students looking for high-level classes in their senior year, as there are a wide variety of options available for them to choose from.**

Regarding the topics specifically addressed in **AP Physics-C: E & M**, the excerpt from the *WHS Program of Studies* for **Honors Physics** shows that the topics of electricity and magnetism are included in this curriculum:

“Honors Physics is a challenging course designed to be an introduction to these fundamental physics concepts. An emphasis will be placed on classical mechanics, the study of the motion of objects that includes kinematics and projectile motion, Newton’s laws of motion and law of universal gravitation, planetary motion, energy and momentum. However, students will also be introduced to waves and sound, electrostatics, DC circuits, magnetism and electromagnetic waves.”

The excerpt from the *AP College Board* course description of **AP Physics 1** demonstrates that electricity is covered in the curriculum, though magnetism is not. However, students taking this course can place out of required college courses assuming they score well enough on the exam.

“AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through inquiry-based investigations as they explore these topics: kinematics; dynamics; circular motion and gravitation; energy; momentum; simple harmonic motion; torque and rotational motion; electric charge and electric force; DC circuits; and mechanical waves and sound.”

**AP Physics: C – Mechanics** is a calculus-based approach to mechanics and provides students who are planning to specialize in the physical sciences or engineering, experience in comprehending physics concepts through applied calculus. For these students, most colleges require an introductory physics sequence that includes courses equivalent to Physics-C (according to the AP College Board). Therefore, students who choose to take this physics course are gaining the valuable experience they need to help them excel and likely follow an accelerated science path in college focusing on physical science or engineering.