

<p>Advanced Placement Chemistry A & B is designed to be the equivalent of a college introductory chemistry course usually taken by students who have an interest in biological sciences, physical sciences, or engineering. The Advanced Placement Chemistry course expands the knowledge and skills gained during the introductory high school chemistry course. It provides students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of chemistry.</p> <p>Students completing this course are expected to take the AP exam.</p>	<p>1 Unit H. Chemistry Teacher/Department Recommendation</p>	<p>½ unit per semester 1 QP</p>
<p>Physics A & B is a detailed study of energy and its relation to matter, beginning with mechanics (the study of motion) and extending to nuclear, sound, and electromagnetic energies. Electromagnetic energies include optics and electricity and magnetism. Vector mathematics and Algebraic analysis are used extensively. This course will satisfy the graduation requirement of 1/2 unit per semester of a physical science course or may be used as a regular science credit.</p> <p>Required for Graduation</p>	<p>2 Units of Science</p>	<p>½ unit per semester</p>
<p>Advanced Placement Physics I is an algebra-based AP Physics course that is equivalent to a first-semester college physics course. This course provides a systematic introduction to the main principles of physics and emphasizes the development of problem-solving ability. This course is the equivalent to a first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); fluid mechanics; work, energy, and power; and harmonic motion.</p> <p>Some students, as college freshmen, are permitted to undertake upper-level courses in physics or register for courses for which physics is a prerequisite after achieving an adequate score on the optional Advanced Placement Examination.</p> <p>Students completing this course are expected to take the AP exam.</p>	<p>2 Units of Science Teacher/Department Recommendation</p>	<p>½ unit per semester 1 QP</p>
<p>Advanced Placement Physics II is an algebra-based AP Physics course that is the equivalent to a second-semester physics course. The course covers thermodynamics; electricity and magnetism; optics; and atomic and nuclear physics.</p> <p>Some students, as college freshmen, are permitted to undertake upper-level courses in physics or register for courses for which physics is a prerequisite after achieving an adequate score on the optional Advanced Placement Examination.</p> <p>Students completing this course are expected to take the AP exam.</p>	<p>2 Units of Science AP Physics 1 Teacher/Department Recommendation</p>	<p>½ unit per semester 1 QP</p>
<p>Advanced Placement Physics C: Mechanics is a calculus-based course that includes a detailed study of classical (Newtonian) mechanics.</p> <p>Some students, as college freshmen, are permitted to undertake upper-level courses in physics or register for courses for which physics is a prerequisite after achieving an adequate score on the optional Advanced Placement Examination.</p> <p>Students completing this course are expected to take the AP exam.</p>	<p>2 Units of Science AP Physics 1 AP Calculus (co-req) Teacher/Department Recommendation</p>	<p>½ unit per semester 1 QP</p>
<p>Advanced Placement Physics C: Mechanics/Electricity and Magnetism (“Super Physics”) is a calculus-based course that includes a detailed study of electricity and magnetism as well as Newtonian mechanics. This course covers the content for two AP Physics C courses; Mechanics and E&M, in one year so only students who have successfully completed AP Physics 1 are eligible for enrollment. Students enrolled in this course will receive one unit for each semester.</p> <p>Some students, as college freshmen, are permitted to undertake upper-level courses in physics or register for courses for which physics is a prerequisite after achieving an adequate score on the optional Advanced Placement Examination.</p> <p>Students completing this course are expected to take both AP exams.</p>	<p>2 Units of AP Science AP Physics 1 AP Calculus (co-req) Teacher/Department Recommendation</p>	<p>1 unit per semester 1 QP</p>

<p>Advanced Placement Computer Science is a yearlong course that emphasizes programming methodology and data abstractions. It takes an object-oriented approach to programming based on encapsulating procedures and data. AP Computer Science is taken in order to prepare students to take the College Board AP Computer Science AB exam. This course uses the Java programming language.</p> <p>Note: Student who enroll in this course <i>must be inquisitive, able to work independently and self-directed.</i> Students completing this course are expected to take the AP exam.</p>	<p>2 units of Science Advance Algebra, 80 or better in Analytic Geometry</p> <p>Math Teacher/Dept. Recommendation</p>	<p>½ unit per semester</p> <p>1 QP</p>
<p>Advanced Placement Environmental Science is scientific systematic examination of the inter-relationships of the natural world, and the student will be able to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them.</p> <p>Students completing this course are expected to take the AP exam.</p>	<p>1 unit of Biology 1 unit of Chemistry</p> <p>Teacher/Department Recommendation</p>	<p>½ unit per semester</p> <p>1 QP</p>
<p>Human Anatomy and Physiology Honors A & B is an accelerated course tailored for students with a strong interest in exploring the complex structures and functions of the human body. Students engage in hands-on laboratory experiments and dissections, fostering practical knowledge and critical thinking skills. By the end of the course, students not only gain a profound understanding of the systems of the body but also develop analytical and scientific skills crucial for further studies in biology or related medical fields.</p>	<p>1 unit of Biology 1 unit of Chemistry</p> <p>Teacher/Department Recommendation</p>	<p>½ unit per semester</p> <p>½ QP</p>
<p>Forensics Honors A & B is the application of science to the law. Students apply the principals and techniques of science to analyze crime scene evidence. Emphasis is on laboratory techniques, scientific inquiry, speaking and writing skills, as well as evidence evaluation. The course will cover the topics of basic evidence techniques, hair, fibers, plant evidence, blood, toxicology, DNA, fingerprinting, cyber forensics, decomposition, entomology, forensic anthropology, impression evidence, soil, tool marks, ballistic, glass, document analysis, arson, and criminal profiling.</p>	<p>1 unit of Biology 1 unit of Chemistry</p> <p>Teacher/Department Recommendation</p>	<p>½ unit per semester</p> <p>½ QP</p>
<p>Zoology A & B is an introduction to the field of zoology, which is a sub discipline of biology, the study of life. Zoology, the study of animals, is itself divided into many sub disciplines. It is one of the broadest fields of biology. The sub disciplines are based on functional, structural, and ecological interests that span many groups. Throughout this semester we will examine the interrelationship of different animal groups, the criteria used to classify and organize animals into phyla, and animal adaptations. Since the greatest diversity of the animal kingdom is found in invertebrates, much of the semester will be devoted to their study.</p>	<p>1 unit of Biology</p>	<p>½ unit per semester</p>

STEM ACADEMY SCIENCE OFFERINGS 2025-2026

Course Description	Prerequisites	Units
<p><u>STEM Biology I Honors A & B</u> is an accelerated course designed for students interested in pursuing advanced sciences or careers in the science or engineering fields. Students will learn and understand biological processes that occur on the molecular, cellular, systemic, and environmental levels. Students will also be able to implement applications of biological processes to everyday situations. This course is integrated with STEM 9th Literature, Principles of Biomedical Science and Introduction to Engineering and has increased focus on critical thinking, collaboration, creativity and communication. <u>Required for graduation from STEM Academy.</u></p>	ACCEPTANCE INTO STEM ACADEMY	<p>½ unit per semester</p> <p><i>½ QP</i></p>
<p><u>STEM Chemistry I Honors A & B</u> is an accelerated introduction to the study of the structure, properties, and functions of matter, and is the foundation for a variety of fields of study as well as the basis for much of modern day industry and economics. Because of the abstract nature of atoms and molecules, there is a strong conceptual and abstract application component in its study, including both qualitative and quantitative laboratory work and mathematical analysis. At the honors level there is a significant amount of mathematics. This course is integrated with STEM 10th Literature, Human Body Systems and Principles of Engineering and has increased focus on critical thinking, collaboration, creativity and communication. <u>Required for graduation from STEM Academy.</u></p>	ACCEPTANCE INTO STEM ACADEMY	<p>½ unit per semester</p> <p><i>½ QP</i></p>
<p><u>STEM Advanced Placement Physics I</u> is an Algebra-Based AP Physics I course that is the equivalent to a first-semester college physics course. This course provides a systematic introduction to the main principles of physics and emphasizes the development of problem-solving ability. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); fluid mechanics; work, energy, and power; and mechanical waves and sound. It will also introduce electric circuits. This course is integrated with PLTW Medical Interventions and PLTW Aerospace Engineering and has increased focus on critical thinking, collaboration, creativity and communication. <u>Required for graduation from STEM Academy.</u></p> <p>Some students, as college freshmen, are permitted to undertake upper-level courses in physics or register for courses for which physics is a prerequisite after achieving an adequate score on the optional Advanced Placement Examination. <u>Students completing this course are expected to take the AP exam.</u></p>	ACCEPTANCE INTO STEM ACADEMY	<p>½ unit per semester</p> <p><i>1 QP</i></p>