Science

Biology I

Credit: One (state)

This lab-oriented course involves the study of topics such as; structures and functions of cells and viruses; growth and development of organisms; cells, tissues, and organs; nucleic acids and genetics; biological evolution; taxonomy; metabolism and energy transfers in living organisms; living systems; homeostasis; ecosystems; and plants and the environments.

Pre-AP Biology I

Credit: One (state)

This rigorous lab-oriented course adds independent research to in-depth study of cell biology, biochemistry, genetics, botany, physiology, zoology, and theories of life.

AP Biology II

Prerequisites: Biology I, Chemistry I, Physics I (recommended)
Credit: One (state)

Students examine in-depth molecular and cellular biology, structure and function, population biology, and use independent research in a lab-oriented Advanced Placement course.

Chemistry I

Prerequisites: Algebra II (may be concurrent)
Credit: One (state)

This lab-oriented course covers topics such as: energy transformations during physical and chemical changes; atomic structure; periodic table of elements; behavior of gases; bonding; nuclear fusion and nuclear fission; oxidation-reduction reactions; chemical equations; solutes; properties of solutions; acids and bases and chemical reactions. Students investigate how chemistry is an integral part of our daily lives.
Pre-AP Chemistry I

Prerequisites: Algebra II (may be concurrent)
Credit: One (state)

This rigorous lab-oriented course offers in-depth study of atomic structures, chemical bonding, formulas and equations, gas laws, acids and bases, solutions, qualitative analysis, and independent research.

AP Chemistry II

Prerequisites: Chemistry I, Physics I
Credit: One (state)

This lab-oriented Advanced Placement course examines in-depth structure of matter, kinetic theory of gases, chemical equilibrium, chemical kinetics, basic thermodynamics, and independent research.

Physics I

Prerequisites: Algebra II
Credit: One (state)

This lab-oriented course investigates the physical laws of nature, including laws of motion, forces, energy, thermodynamics, waves, light, electricity, magnetism, and simple modern physics.

Pre-AP Physics I

Prerequisites: Algebra II, Pre-Calculus (may be concurrent)
Credit: One (state)

This rigorous lab-oriented course adds independent research to the in-depth study of physical laws of nature, including laws of motion, forces, energy, thermodynamics, waves, light, electricity, magnetism, and simple modern physics.
AP Physics B

Prerequisites: Physics I and Pre-Calculus
Credit: One (state)

This rigorous lab-oriented course reviews the concepts of Physics I and applied them in more depth. This course also includes rotation, simple harmonic motion, fluids, more thermodynamics, more waved, more light, and more modern physics. This is algebra and trigonometry based course that follows the outline of the Advanced Placement Physics B exam.

AP Physics C

Prerequisites: Physics I and Calculus (may be concurrent)
Credit: One (state)

This rigorous lab-oriented course reviews the mechanics, electricity, and magnetism concepts of Physics I and applies them in more depth. This course also includes rotation, simple harmonic motion, capacitors, inductors, and Maxwell’s equations. This is a calculus based course that follows the outline of the Advanced Placement Physics C exam.

Anatomy and Physiology of Human Systems

Prerequisites: Biology I, Chemistry I (may be concurrent)
Credit: One (state)

This lab-oriented course deals with human body systems structure and function, gross anatomy, cell specialization, and pathology.

Astronomy

Prerequisites: Biology, one other science credit
Credit: One (state)

This lab-oriented course includes the study of the universe; scientific theories of the evolution of the universe; characteristics and the life cycle of stars; exploration of the universe; role of the sun in our solar system; planets; and the orientation and placement of the Earth.
Environmental Systems

Prerequisites: Biology, chemistry (may be concurrent)
Credit: One (state)

This lab-oriented course examines relationships and interactions of organisms in their natural settings and the impact of humans on those relationships.

AP Environmental Systems

Prerequisites: Biology I, Chemistry I (may be concurrent)
Credit: One (state)

This lab-oriented Advanced Placement course includes the in-depth study of biotic and abiotic factors in habitats; ecosystems, and biomes; interrelationships among resources and environmental systems; sources and flow of energy through an environmental system; relationships between carrying capacity and changes in populations and ecosystems; and changes in environments. Students conduct prescribed field and laboratory investigations, use scientific methods during investigations, and analyze complex problems.

Geology, Meteorology, and Oceanography

Prerequisites: Biology, one science credit
Credit: One (state)

This is a lab and field experience oriented course. It covers the characteristics and interactions between the earth’s crust, atmosphere, and oceans. Some specific concepts studied are the origins of the earth, interactions in a water shed, and natural events in the atmosphere.