

Science

Biology (1.0 credit)

This course provides students with general exploratory experiences and activities in the fundamental concepts of life. Content includes scientific method, scientific measurement, laboratory safety and use of apparatus, cell biology, cell reproduction, basic principles of genetics, and classification and surveying of plants and animals. *Students must take the end-of-course exam. This course is a graduation requirement.*

Biology Honors (1.0 credit)

This course is designed for upper level students and includes the study of scientific method and measurement, laboratory safety and use of apparatus, biochemistry, cell biology, cell reproduction, genetics, classification, taxonomy, and ecological relationships. Students must pass the end-of-course exam to earn credit for the course. *Students must take the end-of-course exam. This course is a graduation requirement.*

AP Biology (1.0 credit)

This course is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes — energy and communication, genetics, information transfer, ecology, and interactions.

Chemistry (1.0 credit)

This course provides students with the study of the properties, composition, and changes associated with matter. Content includes, but is not limited to: classification and structure of matter, atomic theory, the periodic table, bonding, chemical formulas, chemical reactions and balanced equations, the behavior of gases, physical changes, acids, bases, and salts, and energy associated with physical and chemical changes.

Chemistry Honors (1.0 credit)

This course provides students with a rigorous study of the composition, properties, and changes associated with matter. Content includes, but is not limited to: atomic structure, bonding, the periodic table, formulas, stoichiometry, phase changes, specific heat, equilibrium, solutions, acids, bases, and salts, nuclear chemistry, gas laws, and organic chemistry.

AP Chemistry (1.0 credit)

This course provides students with a college-level foundation to support future advanced course work in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore topics such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium.

Physics (1.0 credit)

This course is designed for upper-level students and includes an in-depth coverage of systems of measurement, force, graphical analysis, dynamics, circular and rotary motion, projectile motion, waves, work and power, energy, heat, sound, light, nuclear energy, electricity, and magnetism.

Physics Honors (1.0 credit)

This course is designed for upper-level students and includes an in-depth coverage of systems of measurement, force, graphical analysis, dynamics, circular and rotary motion, projectile motion, waves, work and power, energy, heat, sound, light, nuclear energy, electricity, and magnetism.

AP Physics I (1.0 credit)

This course is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based investigations as they explore topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits.

AP Physics II (1.0 credit)

This course is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based investigations as they explore topics such as fluid statics and dynamics; thermodynamics with kinetic theory; PV diagrams and probability; electrostatics; electrical circuits with capacitors; magnetic fields; electromagnetism; physical and geometric optics; and quantum, atomic, and nuclear physics.

Anatomy and Physiology (1.0 credit)

This course provides students with exploratory and advanced activities in the structure and function of the components of the human body. Content includes, but is not limited to: cellular processes and tissues, the skeletal, muscular, nervous, cardiovascular, respiratory, digestive, urinary, and reproductive systems, and special senses.

Environmental Science (1.0 credit)

This course is a multidisciplinary course that pulls from all the other fields of science to make a connection between people and the world in which they live. The focus of environmental science is on resources, environmental education and communication, and environmental research.

AP Environmental Science (1.0 credit)

This course is designed to be the equivalent of a one-semester, introductory college course in environmental science, through which students engage with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. The course requires that students identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving or preventing them. Environmental Science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography.

Marine Science II (1.0 credit)

This environmental science course is designed to meet the needs of the student who wishes to obtain an in-depth awareness of coastal and marine systems. The course will include a study of the physical, chemical and geological aspects of oceanography, marine biology, the coastal environment and the interrelationships among the disciplines.

Earth Space Science (1.0 credit)

Earth Space Science will provide opportunities for students to develop concepts basic to Earth, its materials, processes, history, and environment in space. Topics will include, but not be limited to: theories about the origin of the universe and solar system, Earth-moon system, minerals and rocks, divisions of the Earth and land forms, hydrological cycle, the atmosphere, and weather. Laboratory activities that include the use of the scientific method, measurement, laboratory apparatus, and safety are an integral part of this course.

Earth Space Science Honors (1.0 credit)

Earth Space Science Honors will provide students with opportunities to develop concepts basic to Earth, its materials, processes, history, and environment in space. Topics will include, but not be limited to: theories about the origin of the universe and solar system, tools of astronomical observation, the solar system, nature of matter and atomic structure, land forms, mineral and rocks, hydrologic cycle, oceanography, the atmosphere, and weather. Laboratory activities that include the use of the scientific method, measurement, laboratory apparatus, and safety are an integral part of this course.