



Science Department Course Descriptions

Anatomy/Physiology 1, 2

Students will study human anatomy and physiology to develop a fascinating understanding into the complexity of one's body. This subject is a gateway to a rewarding career in medicine, science or a host of health-related fields.

Grades 11 & 12 Must have completed biology.

Astronomy Observation 1 (semester class pairs with Honors Planetary Science)

Topics emphasized include life cycles of the stars, structure and composition of the universe, light and telescopes, and the collection and analysis of astronomic data. Observations of the night sky, both at home and at school, are required.

Grades 11 & 12

Biology 1, 2

Students will study components of the living world. Emphasis is placed on the role of the cell and cellular processes, genetics, evolution and ecology. Lab work will include microscopy in cell biology, classification, modeling of hereditary principles and population dynamics. In addition to learning biological concepts, students will use study and use components of the Scientific Method to investigate life science topics. This class must be taken by the sophomore year and the AIMS Science test is administered to students enrolled during the spring semester.

Grades 9, 10, 11 & 12

Biology - Honors 1, 2

This is a rigorous course emphasizing study through inquiry based activities. This class will develop life science skills useful in daily life, future education and career decisions. The study of living organisms will focus on structure, function, and interaction of living organisms. Students will be encouraged to develop their natural curiosity using the scientific approach to problem-solving.

Grades 9, 10, 11 & 12

Biology [AP Biology] 1, 2

AP Biology 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.

Must have completed biology and chemistry before taking this class.

Grades 11 & 12

Biology, Marine 1, 2

Concepts of oceanography and marine biology are covered during the semester. This includes: topography of the ocean floor, tides, currents, pressure, plankton, marine invertebrates and vertebrates, ecology of the oceans, and ocean ecosystems. This course includes lab dissection and other laboratory techniques.

Grades 10, 11 & 12 Must have completed biology.

Chemistry 1, 2

This course introduces the student to the structure of matter, the changes that occur in this structure, and the energy involved in these changes. Chemical reactions are observed and examined in the laboratory.

Grades 10, 11 & 12



Science Department Course Descriptions

Chemistry, Honors 1, 2

This course introduces the student to the structure of matter, the changes that occur in this structure, and the energy involved in these changes. Chemical reactions are observed and examined in the laboratory. Algebra skills are necessary for success in this course.

Grades 10, 11 & 12

Chemistry 1, 2 [AP Chemistry]

The AP Chemistry course provides students with a foundation to support future advanced course work in chemistry. Through inquiry-based learning, students develop critical thinking and reasoning skills. Students cultivate their understanding of chemistry and science practices as they explore topics such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium.

Grades 11 & 12 Must have completed chemistry.

Earth Science 1, 2

Earth Science affects every person in the world, every day. This diverse introductory course covers many aspects of science as they relate to our world and especially to our local environment. In addition to basic scientific skills, students will learn about the origin of our Earth, how it has changed through time, how it is today and what the future may hold for it. In addition, students will investigate the causes and effects of weather, plot California's movement along the San Andreas Fault, study where the dinosaurs roamed and find out what natural substances are used to make items we use daily. Students will learn how these Earth processes affect Arizona.

Grades 9, 10, 11 & 12

Biology, Environmental 1, 2

This course is intended for students who have an interest in the environment and society's interaction with it.

Grades 10, 11 & 12

STEM Science, Technology, Engineering and Math

Students will make coherent connections between concepts within areas of biology, chemistry, and physics. Learning and understanding of conceptual components will be gained through readings, writing, discussions, investigations and scientific inquiry.

Grades 9

Physics 1, 2

Physics is the study of the physical laws of the universe. It includes the study of motion, electricity, light, magnetism, sound and heat. This class teaches students the concepts of physics with algebra-based problem-solving and numerous hands-on experiments and projects.

Grades 10, 11 & 12

AP Physics 1,2 algebra based

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, power, mechanical waves and sound and introductory simple circuits.