

Science

Biology I 20003100 **Prerequisite:** None **Length:** 1 year **GL:** 9-12 **Credit:** 1

This course focuses on the study of life through the examination of fundamental concepts such as cellular biology, genetics, ecology, evolution and physiology. The scientific process and laboratory skills are emphasized along with biology's connections to other scientific disciplines. Students learn specific writing skills and also examine current biological issues. **Students are required to take the state Biology End-Of-Course Exam.**

Q Biology I Honors 20003200 **Prerequisite:** Advanced 8th grade science with recommended grade of C or higher
Length: 1 year **GL:** 9-12 **Credit:** 1

This advanced course will cover essentially the same topics as regular biology, but at higher levels of complexity, greater depth, and faster pace. The reading level will be higher and more reading will be required. Students will be required to use a higher level of vocabulary, do more writing, do more homework, and meet the standards of more challenging tests. **Students are required to take the state Biology End-Of-Course Exam.**

Q Advanced Placement Biology 2003400 **Prerequisite:** Recommended Biology and Chemistry **Length:** 1 year
GL: 9-12

The purpose of this course is to provide a college level course in biology, and to prepare the student to seek credit and/or appropriate placement in college biology courses. To parallel college science courses that have a required laboratory section, it is recommended that this course be accompanied by or paired with Biology II honors to insure sufficient time for the required laboratory experiences. **Students are required to take the Advanced Placement examination.**

Zoology 2000410 **Prerequisite:** Biology 1 or 1H **Length:** 1 year **GL:** 12 **Credit:** 1

This course will provide an in-depth study of the animal kingdom including terminology, cell structure and physiology, genetics, change and adaptation, taxonomy, invertebrate and vertebrate anatomy/physiology, animal behavior, reproduction and development, and ecological relationships.

Q Anatomy and Physiology 20003600 **Prerequisite:** Biology 1 or 1H **Length:** 1 year **GL:** 9-12 **Credit:** 1

This advanced course will provide students with an introduction to the structure and function of the components of the human body. Topics such as cells and tissues, skeletal system, muscular system, nervous system, sensory organs, immune response and inheritance are included. Dissections, including but not limited to the cat, are an integral part of this course. Students are expected to participate in the dissections.

Marine Science I 2002500 **Prerequisite:** None **Length:** 1 year **GL:** 9-12 **Credit:** 1

This course is designed to present an integrated overview of the principles and concepts of the geology, chemistry, physics, and biology as they relate to the world's oceans.

Q Marine Science I 2002510 **Prerequisite:** None **Length:** 1 year **GL:** 9-12 **Credit:** 1

This advanced course will cover essentially the same topics as regular Marine Science 1, but at higher levels of complexity, greater depth, and faster pace.

Environmental Science 20013400 **Prerequisite:** None **Length:** 1 year **GL:** 9-12 **Credit:** 1

The purpose of this course is to study man's interaction with the environment. The content should include, but not be limited to the following: forms of pollution, conservation, environmental planning and policy, public land usages, population dynamics and major forms of energy.

Q Advanced Placement Environmental Science 2001380 **Prerequisite:** Recommended Biology and Chemistry
Length: 1 year **GL:** 9-12 **Credit:** 1

The purpose of this course is to provide a college level course in environmental science, and to prepare the students to seek credit and/or appropriate placement in college environmental science courses. To parallel college science courses that have a required laboratory sections. **Students are required to take the Advanced Placement examination.**

Chemistry I 20033400 *Prerequisite: Algebra 1* *Length: 1 year* *GL: 9-12* *Credit: 1*

This course will provide students with the study of the composition, properties, and changes associated with matter. Topics such as atomic theory, periodic table, bonding, chemical formulas, behavior of gases, and chemical reactions are included.

Q Chemistry I Honors 20033500 *Prerequisite: Algebra 1* *Length: 1 year* *GL: 9-12* *Credit: 1*

This course will provide students with a rigorous study of the composition properties and changes associated with matter. Topics include heat, atomic structure, mole concept, reaction rates and equilibrium, solutions, and electrochemistry.

Q Advanced Placement Chemistry 20033700 *Prerequisite: Recommended Chemistry or 1H* *Length: 1 year*
GL: 10-12 *Credit: 1*

The purpose of this course is to provide a college level course in chemistry, and to prepare the student to seek credit and/or appropriate placement in college chemistry courses. To parallel college science courses that have a required laboratory section, it is recommended that this course be accompanied by or paired with Chemistry II honors to insure sufficient time for the required laboratory experiences. **Students are required to take the Advanced Placement examination.**

Physics I 20033380 *Prerequisite: Algebra I* *Length: 1 year* *GL: 9-12* *Credit: 1*

This course will provide students with a rigorous introductory study of the theories and laws governing the interaction of matter, energy, and the forces of nature. Topics such as kinematics, dynamics, work and power, thermodynamics, wave characteristics and magnetism are included.

Q Physics I Honors 20033900 *Prerequisite: Algebra I* *Length: 1 year* *GL: 9-12* *Credit: 1*

This course will provide students with a rigorous introductory study of the theories and laws governing the interaction of matter, energy, and the forces of nature. Topics include energy, heat, light, electricity, and nuclear physics.

Q Advanced Placement Physics A 2003421 *Prerequisite: Algebra II* *Length: 1 year* *GL: 9-12* *Credit: 1*

Students explore principles of Newtonian mechanics work, energy, and power; mechanical waves and sound; and introductory, simple circuits. The course is based on Six Big Ideas which encompass core scientific principles, theories, and processes that cut across traditional boundaries and provide a broad way of thinking about the physical world. **Students are required to take the Advanced Placement examination.**