# Biology 1

20003104

1 year, Grade 10

The purpose of this course is to provide exploratory experiences and laboratory and real-life applications in the biological sciences. Laboratory investigations, which include the use of scientific research, measurement, laboratory technologies and safety procedures, are an integral part of this course.

#### **Biology I Honors**

20003205

1 year, Grade 9

Prerequisite: Physical Science Honors with a C average or better

A higher level course dealing with the structure and function of plants and animals. Laboratory investigations, which include the use of scientific research, measurement, laboratory technologies and safety procedures, are an integral part of this course.

# **Chemistry I**

20033404

1 year, Grade 10-12

The purpose of this course is to provide students with the study of the composition, properties and changes associated with matter. The content include, but not limited to, classification and structure of matter, atomic theory, periodic table, bonding, chemical formulas, chemical reactions and balanced equations, behavior of gases, physical changes, acids, bases and salts and energy associated with physical and chemical changes. Opportunities to understand the interactions of science with technology and society will be provided.

## **Chemistry I Honors**

20033505

1 year, Grades 10-12

Prerequisite: C average or better in Honors Science, Algebra I and Geometry

Chemistry honors is the advanced study of matter and how it reacts with other matter. The purpose of this course is to provide students with the study of the composition, properties and changes associated with matter. The content include, but not limited to, classification and structure of matter, atomic theory, periodic table, bonding, chemical formulas, chemical reactions and balanced equations, behavior of gases, physical changes, acids, bases and salts and energy associated with physical and chemical changes. Opportunities to understand the interactions of science with technology and society will be provided. It requires much memorization and algebra along with good lab technique.

#### Physics I

20033904

1 year, Grades 11-12 Prerequisite: Chemistry 1

The physics curriculum includes interactions of matter and energy, velocity, accelerations, force, energy, momentum and charge. Students will be challenged to apply their knowledge of the laws of physics to solve physics related critical thinking problems.

#### **Physics I Honors**

20033905

1 year, Grades 11-12

Prerequisite: B average or better in Chemistry honors

Physics is a mathematical science course that deals with the laws of nature such as gravity, velocity, accelerations, force, energy, electricity, and light. Students will be challenged to apply their knowledge of the laws of physics to solve physics related critical thinking problems.

#### **Anatomy and Physiology Honors**

20003505

1 year, Grades 11-12

Prerequisite: Biology I with a C average

This course is a "must" for all health professions. Study the human body parts and how they work, starting with the cell and ending with the total function of the body. The purpose of this course is to provide students with rigorous content and laboratory activities in the structures of the components of the human body.

#### **Marine Science 1 Honors**

20025105

1 year, Grades 11-12

This 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. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course.

#### **Forensics Science 1 Honors**

20024805

1 year, Grades 11-12

This course offers extensive laboratory experience that integrates the concepts learned in biology, chemistry and physics to strengthen individual skills in scientific reasoning and observation. Using inquiry-based settings, students will learn basic scientific and mathematical methods and models required in forensic science. Representative skills are: the determination of the force and motion of a vehicular crash, or the logical sequence of events determined through blood spatter analysis. The course also includes examination of physical evidence, correct crime scene protection and investigation, forensic entomology, ballistics and trajectory, and forensic anthropology.

## **Advanced Placement Chemistry**

20033709

1 year, Grades 11-12

Prerequisite: Chemistry I or Chemistry I Honors

AP Chemistry is a first-year college-level chemistry course that deals with the topics of acid-base reactions, chemical kinetics, thermodynamics and electrochemistry. Students anticipating taking this course should be highly motivated and have excellent grades in Chemistry I or Chemistry I Honors.

# **Advanced Placement Physics**

1 year, Grades 11-12

Advanced Placement Physics 1 is the equivalent to a first-semester college course in algebra-based physics. Covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; mechanical waves and sound. It will also introduce electric circuits.

# **Advanced Placement Biology**

20003409

1 year, Grades 11-12

Prerequisite: Biology Honors and Chemistry Honors

The purpose of this course is to provide a college-level course in the biological science and to prepare students to seek credit and/ or appropriate placement in college biology courses. The content should include molecular and cellular biology, organismal biology and popular biology, along with other appropriate topics. Opportunities to understand the interactions of science with technology and society should be provided. Specific AP lab activities are course requirements. All students enrolled in AP biology are REQUIRED to take the national AP biology exam.

## **Advanced Placement Environmental Science**

20013809

1 year, Grades 10-12

Prerequisite: Completion of biology and a 2.0 GPA

Have you ever hugged a manatee? Have you ever walked in a rain forest? Where does your drinking water come from? Study the local and global environment, work with current national and international agencies to gather and interpret data for worldwide distribution, help design informative and educational displays for city, county and state contests, and participate in Global Research on how to effectively change, adapt, and improve the environment. Hands on and field experiences is an important part of the program. Computer skills helpful but not required.