Chemistry

Length of course: Year
Eligible grade levels: 10th -12th
Prerequisites for this course: Biology and Algebra I. "Recommended grade of B or higher in Algebra is suggested."

Course credit: 1.0credit

Course fee: none

What you will learn in this course:
Major topics of study are atomic theory, writing chemical formulas and equations, periodic law, types of chemical reactions, and mass stoichiometry.

How you will learn in this course:
Class time is divided between class lecture, labs, and chemical demonstrations.

Why this course is important:
This is a lab science that is strongly recommended for any students who intend to further their education, especially in science or health related field.

Physics A

Length of course: Year
Eligible grade levels: 11th -12th
Prerequisites for this course: Algebra I, and Algebra II (or concurrently)

Course credit: 1.0 credit

Course fee: none

What you will learn in this course:
Topics of study included but are not limited to the following: motion, force, energy, momentum, electricity and optics.

How you will learn in this course:
All of the central models of physics will be developed through experiential learning. Students will build these models through lab experiences, seeing, hearing, graphing and most importantly **thinking**.

Why this course is important:
Physics A is important because students will not only develop an appreciation of how nature works but they will also develop important life skills such as:

-critical thinking and co-operative learning skills.
- speaking and listening effectively.
- writing scientifically.
- manipulating scientific equipment.
- mental fortitude needed to solve difficult problems.

AP Biology

Length of course: Year
Eligible grade levels: 11th -12th
Prerequisites for this course: General Biology, Chemistry or consent of instructor and guidance

Course credit: 1 credit

Course fee: Students are required to take the AP Biology exam at the completion of this course in May. The test costs approximately $80. If you score a 3, 4, or 5 on the test (on a five point scale) you may earn between 4-8 college credits, depending on your school/major of choice.

What you will learn in this course:
This course is designed to be the equivalent of a college introductory biology course usually taken by biology majors during their first year. The two main goals of AP Biology are to help students develop an understanding of modern biology and to help students gain an appreciation of science. The fact that biology changes every day makes this challenging! The primary emphasis in AP Biology is on developing an understanding of concepts rather than on memorizing terms and technical details. You will study cells, genetics, plants and animals, evolution, and ecology in more detail than in general biology.

How you will learn in this course:
You will learn by reading the chapters in each unit and writing about what you have learned. While you are reading, we will work to simplify the material through lectures, discussions, labs and hands on activities. We use the SMART board nearly every day to bring in pictures and diagrams that will help you. There are several labs and projects that will help you to understand the material. You will also have many study groups as the test approaches in May to review material and prepare you for the exam.

Why this course is important:
First, this course will work to prepare you for college and help you to learn how to study college level material. This is an advantage to all students who are planning on going to college, regardless of major.
Secondly, if you do well on the AP exam you can often take upper-level courses in biology sooner than you would generally be able to. If you are a Biology major, this could shorten your time in college or allow you to take other courses. If you are not a Biology major, and just enjoy science, doing well on the AP exam will allow you to fulfill your basic science requirement in college and you will be able to undertake other courses to pursue the major of your choice and not need to worry about this requirement.