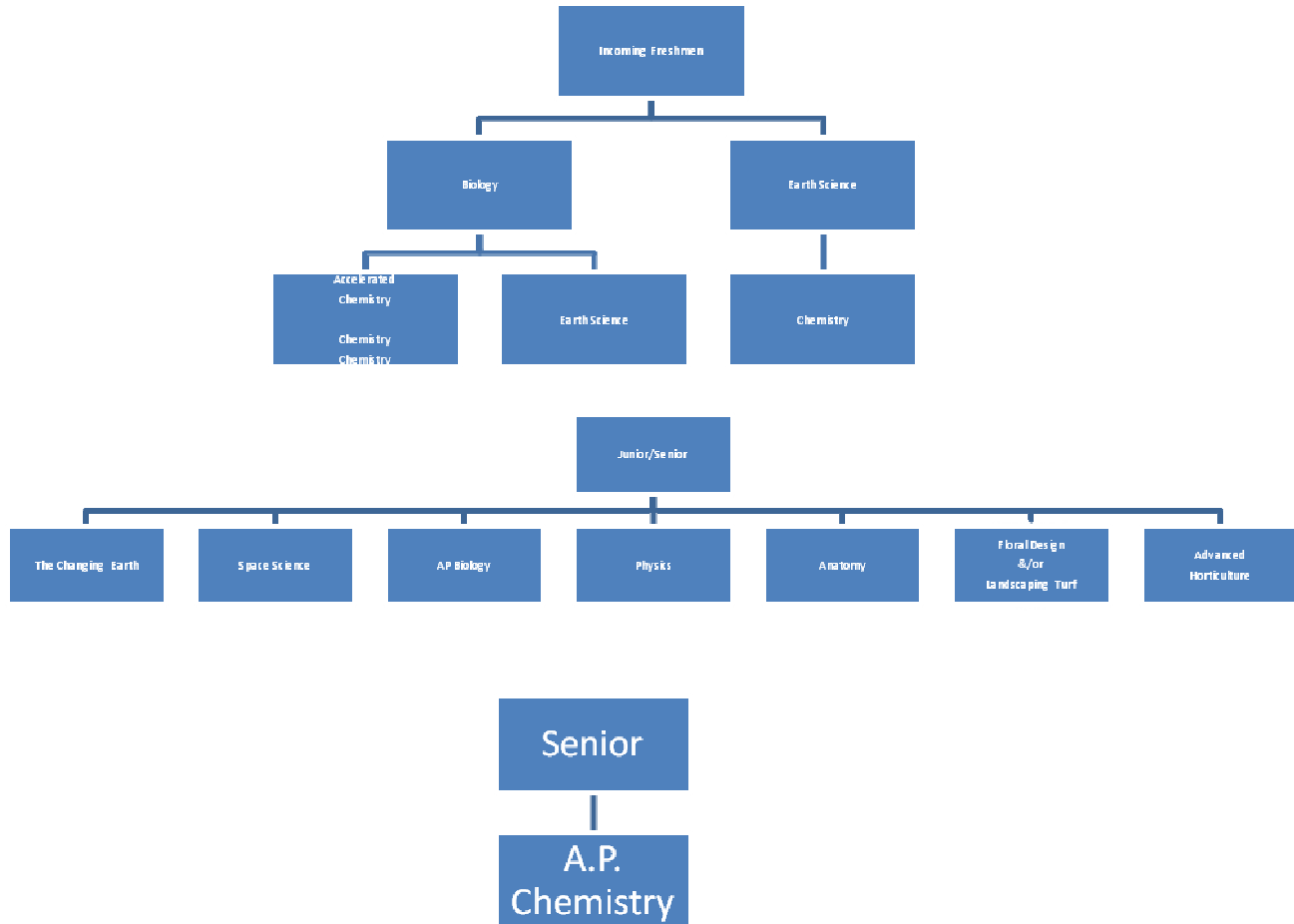


SCIENCE

Stillman Valley High School Science Course Options



Earth Science Grade 9,10,11,12 1 year 1 credit

The study of earth science involves a variety of topics including geology, meteorology, oceanography and astronomy. Topics discussed will include minerals and rocks, plate tectonics, earthquakes, volcanoes, geologic time, weather, water, and outer space. Laboratory and field exercises will be used to investigate the Earth. This class also includes a variety of projects and presentations based on earth science topics. Basic laboratory skills will be emphasized.

Biology Grade 9 (With Instructor Consent),10,11 1 year 1 credit

This course involves a comprehensive study of living organisms. Topics include ecosystems and ecology, evolution, cellular and microbiology, genetics, and the animal kingdom. Proper use and handling of the microscope and dissecting tools are included. Laboratory exercises and extensive vocabulary development are stressed in this course.

Accelerated Chemistry

Grade Level: 10-11-12 1 year 1 credit

Prerequisite: **Satisfactory completion of Biology and Algebra 1**

This course deals with matter and energy as well as the changes that can take place through chemical interaction. The emphasis will be on understanding the core topics of theoretical chemistry with slightly less emphasis on the mathematical expression of chemical concepts. Laboratory work is a significant part of the course. Students enrolling in this course will find themselves adequately prepared for their first year of college chemistry.

Chemistry

Grade Level: 10-11-12 1 year 1 credit

Prerequisite: **Satisfactory completion of Biology**

This course deals with matter and energy as well as the changes that can take place through chemical interaction. The emphasis will be on understanding the core topics of theoretical chemistry with slightly less emphasis on the mathematical expression of chemical concepts. Laboratory work is a significant part of the course. Students enrolling in this course will find themselves adequately prepared for their first year of college chemistry.

The Changing Earth

Grade Level: 11-12 1 semester .5 credit

This course includes the study of topics dealing with global weather and climate, oceanography, environmental issues and mapping. This class will involve a great deal of reading and writing. A research project will be required.

Space Science

Grade Level: 11-12 1 semester .5 credit

This course involves the study of astronomy with topics including historical astronomy, properties of stars and galaxies, the sun and earth's place in the universe, and current research of the universe. This class will involve a great deal of reading and writing. A research project will be required.

Anatomy

Grade 12 1 year 1 credit

Prerequisite: **Satisfactory completion of Biology and Chemistry**

Human Anatomy deals with the structure of the human body. Students are responsible for the eleven major systems. Structure and function of the cells in each organ will be studied. Students will be expected to know bones, muscle physiology, and body chemistry. Cellular development to the organized body system will be covered. An understanding of chemistry and principles of biology are essential for this course

Physics

Grade 11-12 1 year 1 credit
Prerequisite: **Satisfactory completion of Algebra 1 and 2**
Co requisite: **Pre Calculus**

This course is for the student going on to college and majoring in a science related field. Good math and science skills are essential. The course will cover the basic concepts of classical physics including motion, electricity, gravity, magnetism, torque, kinetic molecular theory, waves, energy and light. There will be a strong laboratory emphasis and a great deal of work done outside of class.

Advanced Placement Biology

Grade 11-12 1 year 1 credit
Prerequisite: **Satisfactory completion of Biology and Chemistry**

A.P. Biology is designed for college-bound students to increase concepts dealing with laboratory procedures, microbiology, biochemistry, genetics, plant and animal physiology and classification of organisms.

Advanced Placement Chemistry

Grade 12 1 year 1 credit
Prerequisite: **Satisfactory completion of Accelerated Chemistry and enrollment or completion of PreCalculus. Physics is helpful but not required.**

This course is for college bound students interested in pursuing a science related career. There will be in-depth coverage of concepts introduced in first year Chemistry along with new units on thermodynamics, quantum mechanics, acid/base equilibrium, solubility and organic chemistry. Laboratory experiments are more detailed and student directed. A strong math background is essential.