

SCIENCE

Honors Earth Science R **Full Year** **1 Credit**

The curriculum for Honors Earth Science will follow the same format and content as that of the Regents Earth Science. Honors Earth Science is the most intensive level of the discipline. Students placed in this section should be highly motivated, exceptional students with excellent math skills, and be prepared to always hand in quality work on time and need no reminders to do this. Lab requirement must be satisfied to sit for the Regents Exam.

Earth Science R **Full Year** **1 Credit**

The course of Earth Science introduces the student to geology, astronomy, meteorology and oceanography with labs on alternate days throughout the year. Lab requirement must be satisfied to sit for the Regents Exam.

Earth Science C **Full Year** **1 Credit**

This course in Earth Science is similar in objective and subject matter to Regents course but subjects are not studied in as great depth. This course is designed for the slower learners with special needs.

Unified Science

A general level non-lab course for 9th graders. Teacher recommendation only.

Honors Living Environment **Full Year** **1 Credit**

The curriculum for Honors Biology will follow the same format and content as that of the Regents Biology curriculum with some exceptions. This is noted, as “Enriched” or an “Honors” section on your transcript-you must earn that distinction! There are four additional major projects, a reading requirement (4 books), additional labs and lab write-ups and a term paper at the end of the year. Students placed in this enriched section should be highly motivated, exceptional science students, and have good reading comprehension skills. Their work should always be handed in on time, require little to no reminding about completing lab write-ups, and be willing to participate in class discussions.

Living Environment R & C **Full Year** **1 Credit**

This course provides students with a complete survey of the Biological World and its related life processes. Laboratory performance and written lab reports are required. All labs must be completed for student to be eligible to take the Regents Exam.

Honors Chemistry **Full Year** **1 Credit**

Honors chemistry is the most intensive level of the discipline. Extended topics as well as additional investigations inside and outside of the classroom will be assigned. Students considering this selection should possess dependable work habits, solid study and listening skills and be confident of their mathematical ability.

Chemistry R **Full Year** **1 Credit**

Prerequisite: Algebra R
Recommended: Geometry R

Regents Chemistry involves the study of matter and the changes that matter undergoes. Suitable for students pursuing a science sequence, that may or may not be interested in a career in science. Emphasis is placed on the application of chemical principles as opposed to sheer memorization. Whenever possible, concepts are studied from a quantitative perspective. Units covered during the year include: matter and energy, atomic structure, bonding, periodic table, mathematics, kinetics and equilibrium, acids and bases, redox and electrochemistry, organic, application of chemical principles, and nuclear. Yearly course includes a daily recitation and a laboratory every other day. Regent’s exam at the end of the year.

Chemistry G **Full Year** **1 Credit**

Recommended: Algebra R

Chemistry is the study of the composition of matter and how this composition can be changed. Areas emphasized are atomic and molecular structure, the behavior of gases, chemical bonding, the mathematics of chemistry, kinetics and equilibria, acid-base theory, the forces driving a chemical reaction, and organic chemistry.

Forensic Science **One Semester** **½ Credit**

Forensic science is the application of science to law. In our ever-changing society it is becoming more important for the rules of law to govern its members. Forensic science applies the knowledge and technology of science to assist in the enforcement of such laws. Topics of discussion may include: history of forensic science, the crime lab, crime scene, physical evidence, drugs, firearms, internet, handwriting and voice examination.

Household Chemistry **One Semester** **½ Credit**

An introduction to properties of chemical substances found in the home. Concrete examples of everyday household materials are used to formulate the theoretical framework used in modern chemistry. The nature and reactivity of materials will be emphasized with topics of a personal nature, such as chemical additives in food, and a national/worldwide nature, such as water and air pollution. Students study the material through lecture, discussion, simulations, group activities, outside readings and laboratory experiences.

Environmental Science I & II **2 Separate 1 Semester Classes** **½ Credit per semester**

Prerequisite: Biology

Environmental Science will consist of two separate ½ year courses comprising related but distinct topics of study. Students who wish may take both semesters without duplication or repetition. In the first semester topics to be covered include: global perspective, ecosystems, biodiversity, interdependence, biomes, water resources and air. The second course will continue with the following topics of study: atmosphere and climate, land use, agriculture and food, energy, waste, population and sustainability. Both semesters will be taught with a combination of lecture, written projects, in-class labs, and field investigations (weather and topic permitting).

Physics R **Full Year** **1 Credit**

Prerequisite: Algebra II/Trigonometry R

This course uses mathematical application to study mechanics, energy (mechanical, electrical and heat), electricity, magnetism, wave phenomena (sound, light and optics) and modern physics. Advanced algebra, trigonometry, and graphing are essential for this course. Lab held on alternate days.

Physics G **Full Year** **1 Credit**

Prerequisite: Algebra R

This course takes a conceptual look at Physics. Physics is the study of mechanics, energy (mechanical, electrical and heat), wave motion (sound and light), and modern physics. Mathematical application is limited. The class is activity oriented with many hands-on problem-solving sessions.

College Physics Part I
(Physics 111 offered through Clinton Community College)

Full Year

1 High School Credit
4 College Credits

Prerequisite: Algebra

II/Trigonometry R and Teacher Recommendation
College Tuition Cost: Approximately \$200 (Subject to change)

This is the first of a two-semester sequence designed to present concepts and applications of the following topics: kinematics, dynamics, gravitation, energy, momentum, and heat. Advanced algebra, trigonometry, and graphing skills are essential for this course. Lab periods will be held on alternate days. Students can also use this course as partial preparation for taking the Physics B - AP Exam in May.

College Physics Part II
(Physics 112 offered through Clinton Community College)

4 College Credits

Prerequisite: Algebra II/Trigonometry R and Physics 111
College Tuition Cost: Approximately \$200 (Subject to change)

This is a continuation of the college physics course offered through Clinton Community College. Topics covered will include sound, optics, electricity, magnetism, and modern physics. Advanced algebra, trigonometry, and graphing skills are essential for this course. Lab periods will be held on alternate days. Students can also use this course as partial preparation for taking the Physics B – AP Exam in May.