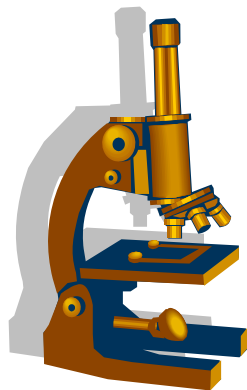


Criteria for Placement in Honors Science Courses at PCHS



A successful student in the PCHS Honors Science Program is self-motivated, diligent, responsible, bright, articulate, has strong initiative, and is willing to commit extra hours to studying. Excellent attendance is required to meet the demands of the Science Honors Program. The requirements for placement in each Honors and AP course are outlined below, followed by the criteria used for determining how teacher recommendations are made.

Placement in Honors Biology is based upon the recommendations of middle school science teachers. A standard scoring sheet is used in all middle schools in Charlotte County to determine which students will receive this recommendation. This course is designed to prepare the student for enrollment and success in an Advanced Placement and/or Dual Credit or Dual Enrollment course.

Placement in Honors Chemistry is based on teacher recommendation, a passing score on a chemistry placement test, a prerequisite grade of A, B, or C in Honors Biology, and a prerequisite grade of A or B in Algebra I. This course is designed to prepare the student for enrollment and success in an Advanced Placement and/or Dual Credit or Dual Enrollment course.

***If student is already established as an honors' science student, a new teacher recommendation form is not required.*

Placement in Honors Physics is based on teacher recommendation, the completion or concurrent enrollment in Algebra II, and a prerequisite grade in Honors Chemistry of A, B, or C. ***If student is already established as an honors' science student, a new teacher recommendation form is not required.*

Placement in Honors Anatomy and Physiology is based on teacher recommendation, and prerequisite grades of A, B, or C in both Honors Biology and Honors Chemistry. Dissection is a required component of this course. The demands of the course are intended for students interested in pursuing a health related profession. ***If student is already established as an honors' science student, a new teacher recommendation form is not required.*

Placement in Dual Credit Environmental Biology (BSC 1050C/1051C) is based on teacher recommendation, GPA of at least 3.0, and required college entrance scores on ACT, SAT, or CPT.

Placement in AP Biology is based on teacher recommendation, and prerequisite grades of A or B in both Honors Biology and Honors Chemistry. Completion of a summer assignment is mandatory.

Placement in AP Chemistry is based on teacher recommendation, and a prerequisite grade of A or B in Honors Chemistry. Completion of a summer assignment is mandatory.

Placement in AP Physics is based on teacher recommendation, and a prerequisite grade of A or B in Honors Physics. No summer assignment is required at this time.

Criteria for Receiving Teacher Recommendations in Science

To receive a teacher recommendation for any Honors or AP science course after Honors Biology, a student must earn a minimum of 9 points from the rubric below. In order to be consistent, the science teachers at PCHS review this rubric annually. The rubric is applied more stringently for students wishing to enroll in AP courses. ***If student is already established as an honors' science student, a new teacher recommendation form is not required to enter subsequent honors science courses..*

	3	2	1
Questioner	generates insightful/thoughtful questions	generates good/related questions	rarely asks questions (info or instructional)
Pursues Insights, Makes Connections	explores/discovers insights/connections, learns from errors	recognizes connections, considers new ideas, may fear "being wrong"	getting the right answer on the test more important than insights/connections
Self-Motivated, Ready to Learn	consistently prepared for class, persists through difficulties, genuine interest in learning	limited motivation, usually prepared for class, persists "to finish the work"	rarely self motivated without external reward, assignments may be incomplete, may be tardy to class, may spend class time socializing
Positive Learner	contributes to a positive learning environment for all, participates in discussion without dominating, focused listener	contributes to a positive learning environment for self and friends, occasionally participates without being called on, listens to others	reluctant to participate unless called on, unaware of personal responsibility for the learning environment, often unfocused

Port Charlotte High School

Honors Science Instructional Objectives

HONORS BIOLOGY

This course provides opportunities for advanced exploratory experiences and activities in the fundamental concepts of life. Topics include, but are not limited to, cell biology, genetics, classification, animals, plants, and ecological relationships. Lectures, notes, computer programs, and labs are the most common approaches to the material. Students will also complete a research project to be entered in the PCHS Science Fair. This course is designed to prepare the student for enrollment and success in an Advanced Placement and/or Dual Credit or Dual Enrollment course.

HONORS CHEMISTRY

This course is suitable for students who display a high level of competency in the sciences and possess a strong desire to continue their education at a four-year college or university. Topics include, but are not limited to, matter and change, measurements and calculations, atomic structure, nuclear chemistry, The Mole, The Periodic Law, chemical bonding, organic chemistry, stoichiometry, phases of matter, gas laws, reactions in solution, kinetics, and redox reactions. This course is designed to prepare the student for enrollment and success in an Advanced Placement and/or Dual Credit or Dual Enrollment course.

HONORS ANATOMY and PHYSIOLOGY

This course provides students with advanced studies and activities in structures and functions of the components of the human body as well as disease and research. Topics include, but are not limited to, anatomical terminology, cells and tissues, systems of the body, disease and inheritance.

HONORS PHYSICS

This course is suitable for students who display a high level in the sciences and mathematics. This course provides students with an introduction to theories and laws that govern the interaction of matter, energy, and the forces of nature. The content includes, but is not limited to, motion, vectors, and thermodynamics.

DUAL ENROLLMENT ENVIRONMENTAL BIOLOGY (BSC 1050/1051)

BSC: 1050C--Environmental Biology: Our Global Environment

This class, designed for non-science majors, approaches topics in environmental science by studying the impact of humans. Contemporary ecological issues are explored in relation to problems of local, regional, national and global concerns. The format of the class involves combined lecture, lab and field trip activities including discussions and debates of local problems, as well as national and global issues.

BSC 1051C - Environmental Biology: Southwest Florida Ecosystems

This class, designed for non-science majors, studies the natural processes, field study methods and the identification of biotic and abiotic components of the major ecosystems of Southwest Florida. The format of the class involves combined lecture, lab and field trip activities.

AP CHEMISTRY:

In order to accommodate the time required to complete the lab program and the problems solving sessions, Advanced Placement Chemistry is offered during the fourth hour block for the entire school year. Since students may only receive credit for taking the class once, the course is paired with Chemistry II, another college level course, so that students can receive college level credit for both semesters. The main units of study include chemical foundations, stoichiometry and reaction types, thermochemistry, chemical bonding, phases of matter, solutions, gas laws, kinetics, equilibrium, applications of aqueous equilibria, and electrochemistry. More information about the AP program can be found at www.collegeboard.com/ap.

AP BIOLOGY

The purpose of this course is to provide a study of the facts, principles, and processes of biology, and the collection, interpretation, and formulation of hypotheses from available data. The AP Biology course is designed to be the equivalent of a college introductory biology course usually taken by biology majors during their first year. This course aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology.

Major topics for the AP exam include Molecules and Cells (25%); Heredity and Evolution (25%); and Organisms and Populations (50%). Primary emphasis in Advanced Placement Biology is on developing an understanding of the concepts rather than memorizing terms and technical details. Essential to this conceptual understanding are the following: a grasp of science as a process rather than as an accumulation of facts; personal experience in scientific inquiry; recognition of unifying themes that integrate the major topics of biology; and application of biological knowledge and critical thinking to environmental and social concerns. More information about the AP program can be found at www.collegeboard.com/ap.

AP PHYSICS

This course is a college-level course that uses advanced algebra and trigonometry as the primary tools for problem solving. This course covers topics in mechanics, energy, waves, thermodynamics, electricity, magnetism, optics, quantum theory, and nuclear physics. Having an understanding of the basic principles and applying the principles in problem solving is the major goal of this course.