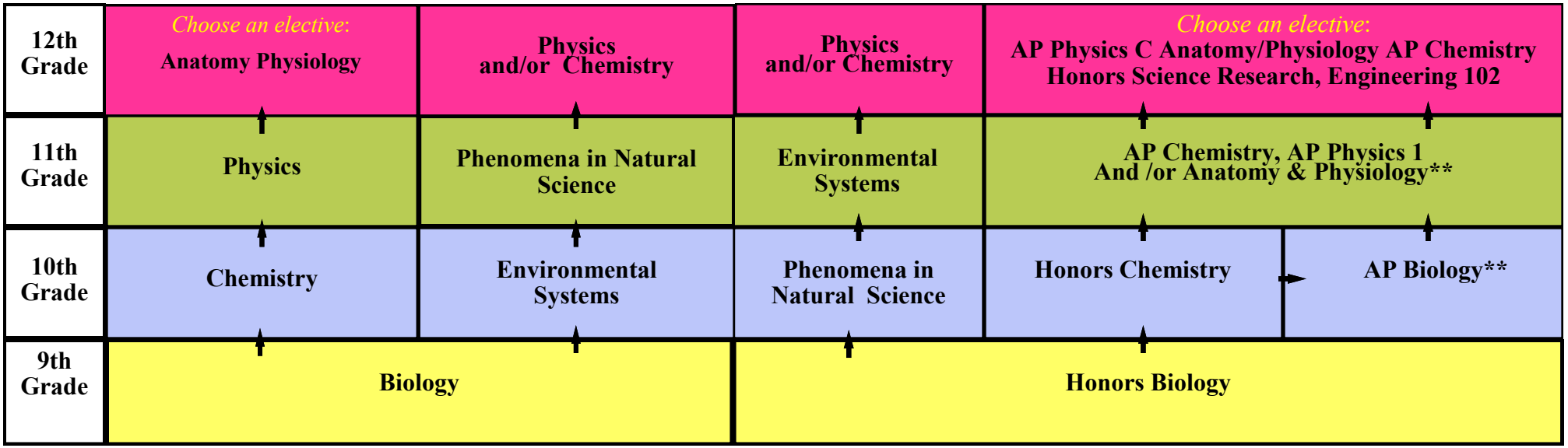
Your path to college science readiness



Biology

This is a lab-oriented course designed to study the major areas of life and living things. Emphasis will be on the major integrating themes of Biology.

Honors Biology

This course is for ninth grade students who are seriously considering preparation for a science curriculum at a post secondary institution. ***(Must be enrolled in or have completed Geometry)***

Phenomena in Natural Science

This is a second year course with a prerequisite of Biology, the course is designed to promote the use of the scientific process to explore natural phenomena, with a focus on physical, earth and space sciences.

AP Biology

This is a second year college level course designed to meet the minimum requirements for the AP exam. This second year course includes topics covered in a college introductory Biology course for majors and provides students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of Biology. ***(Must be enrolled in or have completed Honors Chemistry).***

Anatomy and Physiology

This course deals with the structure and function of the human body and is recommended for students interested in a medical career. A thorough study of the systems of the body is presented. Because of similarities to human systems, group dissections of a cat and sheep organs may be performed.

Chemistry

This is a lab oriented course emphasizing elements, compounds and mixtures as found in nature. This course follows the Modeling curriculum which is designed to construct and use scientific models to describe, to explain, to predict and to control physical phenomena.

Honors Chemistry

This is a lab-oriented course designed for students considering going into AP Chemistry. Major emphasis is on writing and evaluating chemical reactions and relationships. Mathematics Year 2 must be completed before teacher recommendation is honored. This course follows the Modeling curriculum which is designed to construct and use scientific models to describe, to explain, to predict and to control physical phenomena.

AP Chemistry

This is a second year college level course designed to meet the minimum requirements for the AP exam. The study of atomic structure, periodic system, chemical bonding, kinetic theory, equilibrium and descriptive chemistry.

Physics

This is a lab oriented course that studies energy in its many forms. Topics include mechanics, electricity, waves and light. This course follows the Modeling curriculum which is designed to construct and use scientific models to describe, to explain, to predict and to control physical phenomena.

AP Physics 1

This course is for the science, technology and engineering students. This course follows the Modeling curriculum which is designed to construct and use scientific models to describe, to explain, to predict and to control physical phenomena. ***(Must have completed both Algebra 2 and Biology)***

AP Physics C: Mechanics & E/M

This course is designed around the AP Physics C Mechanics and Electricity and Magnetism exams and is equivalent to the first year of calculus based university physics. The Mechanics curriculum covers: kinematics, Newton's Laws, energy, momentum, rotational kinematics and dynamics, angular momentum, gravitation, and oscillations. Electricity and Magnetism covers electrostatics, magnetostatics, induction and circuits. ***(Must be enrolled in or have completed AP Calculus AB or higher. AP Calculus BC is recommended.)***

Engineering 102 Only College Credit $

This course is taken through the University of Arizona for college credit. This course emphasizes engineering design, effective team participation and career preparation. Students are expected to participate in hands-on design projects, develop education/career plans and initiate development of their personal and management skills necessary for life long learning. ***(Must be enrolled in or have completed AP Physics C and AP Calculus AB or higher)***

Honors Science Research (Elective)

HSR is an independent research class designed to allow students to conduct a university level research project. Students are involved with developing literature reviews, creative problem solving, hypothesis and rationale. They establish independent research based mentorship/internship projects with Arizona State University and other various laboratories around

Environmental Systems Science

This course introduces the use and importance of geological studies as they apply to the interactions between people and earth. Includes geological processes and hazards such as floods, earthquakes, and landslides; use of fossil fuels; mining of raw materials.

*** May be taken simultaneously*

Math & Science

Biology-Algebra 1 or Higher
Hon Biology-Geometry or Higher
AP Biology-Geometry or Higher

Chemistry-Geometry or Higher
Hon. Chemistry– Geometry or Higher
AP Chemistry-Algebra II or Higher

Phenomena in Science-Geometry or Higher
Environmental Science-Geometry or Higher

Physics-Algebra II or Higher
AP Physics-Algebra II or Higher
Physics C– Pre-Calculus or Higher

Anatomy and Physiology–Chemistry
Algebra II or Higher

Honors Senior Research-Algebra 1

Engineering 102– AP Physics or Higher
Pre Calc or Higher

"Dare to Dream"

For additional information on course offerings, Dual Credit and Advance Placement, please contact Hamilton High School at 480.883.5000 or check out Hamilton at www.hamiltonhuskies.com

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