

Dreher High School Science Department

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General Course Sequence

- The sequence of science courses is determined by students' aptitude and interest. There are many options for students.**
- Prerequisites can include previous science and math courses. Guidelines published in Richland School District One's Course Catalog are followed.**
- Three lab-science credits are required for graduation. End-of-course exams are given in Biology.**

General Course Sequence

-Freshmen: Biology Honors, Biology CP, Physical Science CP

-Sophomores: Chemistry Honors, Chemistry CP, Biology CP, Anatomy and Physiology Honors

-Juniors: Chemistry CP, Anatomy and Physiology Honors, Anatomy and Physiology CP, Physics Honors, Physics CP, AP Biology, AP Chemistry, AP Physics 1, AP Environmental Science

-Seniors: Anatomy and Physiology Honors, Anatomy and Physiology CP, Physics Honors, Physics CP, AP Biology, AP Chemistry, AP Environmental Science, AP Physics 1, AP Physics 2

AP Course Offerings

- The Science Department offers five AP science courses to juniors and seniors.**
- These courses provide students with the opportunity to experience the rigor and expectations of a college-level course while still in high school.**
- AP courses culminate in three-hour exams administered by the College Board and given in May.**
- Students who earn a qualifying score on an AP exam are typically eligible, in college, to receive credit, placement in advanced courses, or both.**

AP Biology

-AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics:

-Evolution

-Cellular process –energy and communication

-Genetics

-Information transfer

-Ecology

-Interactions

-Students should have successfully completed high school courses in biology and chemistry.

AP Chemistry

- The AP Chemistry course provides students with a college-level foundation to support future advanced course work in chemistry.
- Students cultivate their understanding of chemistry through inquiry-based investigations as they explore topics such as:
 - Atomic structure
 - Intermolecular forces and bonding
 - Chemical reactions
 - Kinetics
 - Thermodynamics
 - Equilibrium
- Students should have successfully completed a general high school chemistry course and Algebra II before taking AP Chemistry.

AP Environmental Science

- The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science.**
- The course requires that students identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving or preventing them.**
- Environmental Science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography.**
- Students should have completed Biology and Chemistry. Due to the quantitative analysis required in the course, students should also have taken at least one year of algebra.**

AP Physics 1

- AP Physics 1 is a full-year course that is the equivalent of a first-semester introductory college course in algebra-based physics.
- Students cultivate their understanding of physics through inquiry-based investigations as they explore these topics:
 - Kinematics
 - Dynamics
 - Circular motion and gravitation
 - Energy
 - Momentum
 - Simple harmonic motion
 - Torque and rotational motion
- Students should have completed or be concurrently taking Pre-Calculus.

AP Physics 2

- AP Physics 2 is a full-year course, equivalent to a second-semester introductory college course in algebra-based physics.
- Students cultivate their understanding of physics through inquiry-based investigations as they explore these topics:
 - Fluids
 - Thermodynamics
 - Electrical force, field, and potential
 - Electric circuits
 - Magnetism and electromagnetic induction
 - Geometric and physical optics
 - Quantum, atomic, and nuclear physics
- Students should have completed AP Physics 1.

2022-23 Science Department Faculty

Mathew Hedden: Physics, AP Physics 1, AP Physics 2

Averey Isgett: Biology, Anatomy and Physiology

Taylor Knoke: Biology, AP Environmental Science

Janet Latha: Physical Science, Chemistry

Elizabeth Link: Chemistry, AP Chemistry

Amanda Molina: Biology, AP Biology

Alyssa Stephens: Chemistry, Physical Science

Kevin Watts: Anatomy and Physiology