

Why take a Science Elective Class? Careers in Health Sciences and Environmental Science/Green Technology are the fastest growing fields in the current job market. Science will help you understand big and small problems that you will have to help solve in years to come.

AP and Dual Credit courses are classes that **must follow a curriculum based on what students would learn and do in a first year college class.** *Expect plenty of reading, extended time studying or solving problems, lab work and reports as homework frequently. The retake practice from earlier classes will not apply due to required content and pacing.*

AP Courses are year-long classes that develop scientific thinking and reasoning skills through inquiry based learning, guided practice, and direct instruction. Students are encouraged to take the Advanced Placement Examination for potential college credit depending upon score.

- **AP Physics 1:** Major concepts include motion, forces, work and energy, momentum, electricity, electrostatics, rotation, and universal gravitation.
- **AP Physics 2:** Major concepts include kinematics (the description of motion), dynamics (causes of motion), and kinetic theory of gases, wave motion, sound, light, electricity, magnetism, and the structure of matter. This course is recommended for students planning college work in the sciences or mathematics.
- **AP Biology:** Major concepts include macromolecules, cells, heredity, evolution and organisms/populations.
- **AP Chemistry:** Explore the structure, states and reactions of matter. Major concepts include stoichiometry, atomic structure, periodicity, chemical bonding, solutions, kinetics, equilibrium, thermodynamics, and electrochemistry.
- **AP Environmental Science:** Explore environmental problems, the relative risks associated with these problems, and alternative solutions for resolving and/or preventing them. Field work may include field trips that cost \$.

Dual Credit Courses through College of DuPage at West Chicago HS are year-long courses. For Dual Credit, students must apply to COD, register for Dual Credit, and qualify through either a required ACT or SAT score or by passing the college's Reading Placement Test at WCCHS in the fall. Courses develop scientific thinking and reasoning skills through inquiry based learning, guided practice, and direct instruction.

- **Human Anatomy and Physiology:** Explore the structures and function of the human body. Primary body systems that are covered include the integument system, skeletal system, muscular system, nervous system, respiratory system, cardiovascular system, digestive system and the reproductive systems. Laboratory work including dissection, clinical applications and case studies related to medical occupation are essential components of the course.
- **Botany:** Explore plant anatomy, physiology, propagation, and identification of plants. Practical application of plant usage integrates landscape design, floral design and a study of the Illinois prairie.

Semester Courses let students experience two areas of science in one school year. Courses earn a semester credit (0.5) and are great introductions to career fields that are currently growing. Seniors have preferred enrollment.

- **Forensic Science:** Use concepts from anatomy, biology, chemistry, earth science, and physics to investigate complex scenarios in fictitious and actual crime cases.
- **Environmental Science:** Explore environmental issues and potential solutions for resolving and/or preventing them. Field work may include field trips that cost money.