

Pathway Courses

Introductory Core Course

Chemistry & Environmental Engineering: Water

This course serves to introduce the principles of chemistry and environmental engineering through an understanding of the behavior of water and its interactions with the environment. Students will use a systems-based approach to understand that all environmental systems consist of matter and will apply this knowledge to solving current and future global water issues. This course seeks to explain the basic chemistry required to understand crucial environmental interactions in order to encourage students to take a critical approach to solving complex water-related issues on a local and global scale. Upon completion of the course, students will be able to integrate the complex questions surrounding the future use and consumption of water and develop possible solutions to this global crisis.

Pathway Courses

Elective Courses

Environmental Sustainability (PLTW)

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Environmental Sustainability (ES) is a specialization course in PLTW Engineering. In ES, students investigate and design solutions to solve real-world challenges related to clean drinking water, a stable food supply, and renewable energy. Students are introduced to environmental issues and use the engineering design process to research and design potential solutions. Utilizing the activity-project-problem-based (APB) pedagogy, students transition from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Through both individual and collaborative work, students practice common design and scientific protocols. Students develop skills in designing experiments, conducting research, executing technical skills, documenting design solutions according to accepted technical standards, and creating presentations to communicate solutions.

Advance Placement (AP) Environmental Studies

The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them.

Pathway Opportunities

Certification Options:

- OSHA 10-Hour General Industry
- Renewable Energy Specialist (CRES)
- Sustainability Specialist (CCS)

Technology Skills:

- Logger Pro
- STEM Hero
- Microsoft Office

Professional Skills:

- Team Collaboration
- Project Management
- Problem-Solving Skills
- Communication Skills
- Presentation Skills
- Technical Writing

Career Opportunities

- Ecosystem Protection & Environmental Management
- Energy Analyst
- Environmental Engineer
- Environmental Science & Protection Technician
- HVAC Technician
- Industry Facilities Technician
- Journeyman
- Lineman
- Load Forecaster
- Pollution Abatement
- Power Plant Technician
- Public Works Director
- Renewable Program Coordinator
- Solar Technician
- Sustainability Engineer
- Utilities Operator
- Water Resources Technician
- Wind Technician

For more information about the Environmental Engineering Pathway, please contact:

CTE Counselor

Mandie Engelbert
559-327-3000

CTE Instructors

Kendia Herrington
Sascha Ludwig

CTE Learning Director

Cecelia Dansby
559-327-3000

Environmental Resources Pathway

Buchanan High School



Clovis Unified School District

HOW TO APPLY:

Request application information from your high school counselor.