PRINCIPLES OF ENGINEERING
Design. Build. Innovate. Solve Real-World Problems.

What You'll Learn

- **Hands-On Engineering Design:** Apply the full engineering design process to prototype, test, and iterate real solutions across product design, mechanical systems, and infrastructure challenges.
  - **Master Industry Tools:** Develop technical skills using 3-D modeling software, hands-on prototyping equipment, programming software, and robotics hardware.
  - **Robotics & Artificial Intelligence:** Program robots using sensors, control systems, and supervised machine learning to solve authentic problems and explore the ethical implications of AI.
  - **Energy, Circuits & Sustainable Systems:** Design electrical circuits, hydraulic systems, and renewable energy devices grounded in rigorous math and physics.
- **Engineering Principles:** Explore foundational concepts, including simple machines, mechanisms, statics, and kinematics that are applicable to many different engineering disciplines.
- **College & Career Readiness:** Develop advanced problem-solving, collaboration, project management, and technical documentation skills aligned with engineering and STEM career pathways.

PLTW
Project Lead The Way

Principles of Engineering is a full-year college preparatory class that is UC/CSU A-G approved.