

PLTW Engineering Students Become Tomorrow's Problem Solvers Today

PLTW Engineering empowers students to step into the role of an engineer, adopt a problem-solving mindset, and make the leap from dreamers to doers. The program's courses engage students in compelling, real-world challenges that help them become better collaborators and thinkers. Students take from the courses in-demand knowledge and skills they will use in high school and for the rest of their lives, on any career path they take.

The Mt. Hope High School CTE Engineering and Advanced Manufacturing pathway provides rigorous school-based learning through PLTW courses aligned to national engineering and advanced manufacturing standards, and RI standards in mathematics, science, and English language arts. School-based learning is enhanced through work-based experiences, including local industry tours, job-shadowing, mentoring, and internship opportunities.

Each PLTW Engineering course engages students in interdisciplinary activities like working with a client to design a home, programming electronic devices or robotic arms, or exploring algae as a biofuel source. These activities not only build knowledge and skills in engineering, but also empower students to develop essential skills such as problem solving, critical and creative thinking, communication, collaboration, and perseverance.

Introduction to Engineering Design

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects like designing a new toy or improving an existing product.

Principles of Engineering

Students explore a broad range of engineering topics including mechanisms, strength of structure and materials, and automation, and then they apply what they know to take on challenges like designing a self-powered car.

Computer Integrated Manufacturing

Students discover and explore manufacturing processes, product design, robotics, and automation, and then they apply what they have learned to design solutions for real-world manufacturing problems.

Computer Science Principles

Using Python® as a primary tool, students develop computational-thinking skills and tackle challenges like designing apps to solve real-world problems for clients.