



Department of Teaching and Learning
Career and Technical Education
Course Information

PLTW Introduction to Engineering Design Honors
Course Credit: 1.0
Course Code: 898400
Grades: 9 - 11

Counselors are available to assist parents and students with course selections. Families may arrange to meet with counselors by contacting the school's counseling department.

COURSE DESCRIPTION

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3-D modeling software, and use an engineering notebook to document their work. Through both individual and collaborative team activities, projects, and problems, students will solve problems as they practice common engineering design and development protocols such as project management and peer review. Students will develop skills in technical representation and documentation of design solutions according to accepted technical standards, and they will use current 3D design and modeling software to represent and communicate solutions. In addition the development of computational methods that are commonly used in engineering problem solving, including statistical analysis and mathematical modeling, are emphasized. Ethical issues related to professional practice and product development are also presented.

This course counts as an elective credit.

COURSE COMPETENCIES

[Course competencies can be found in the Curriculum Guides section.](#)

PREREQUISITE

None

WORK-BASED LEARNING EXPERIENCE

[Mentorship](#)



CREDENTIAL

Students are eligible to sit for the following credential:

None

CAREER AND TECHNICAL STUDENT ORGANIZATION (CTSO)

Technology Student Association (TSA) provides the application and integration of science, technology, engineering, and mathematics (STEM) concepts through co-curricular instruction, leadership development, competitive events and related programs.

BENEFITS OF CAREER AND TECHNICAL STUDENT ORGANIZATIONS INCLUDE:

- Provides a hand-on approach to learning
- Refines career objectives through realistic experiences
- Promotes awareness of new career opportunities
- Develops skills and responsibilities for being a role model and mentor
- Cultivates social development and awareness
- Develops a sense of community and volunteerism
- Develops an appreciation and understanding for cultural diversity
- Improves communication and decision-making skills
- Provides for personal development
- Develops interpersonal and leadership skills
- Develops responsibility and self-confidence
- Provides opportunities for recognition

LAB FEE

There is no lab fee for this course.

OPTIONS FOR NEXT COURSE

- [PLTW Principles of Engineering Honors](#)