

Introduction to Engineering Design (PLTW)

8439 36 weeks

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Course Description

Suggested Grade Level: 9 or 10

This pre-engineering course is one of three core courses (along with Principles of Engineering and Digital Electronics) in a national engineering program. Using computer-modeling software, students learn the design process. They solve design problems as they develop, create, and analyze product models.

Curriculum Framework

Project Lead The Way (PLTW) curriculum guides and course competencies are only available to PLTW affiliated schools through agreement with PLTW. To obtain additional information contact: Project Lead The Way 3939 Priority Way South Drive, Suite 400 Indianapolis, IN 46240 Toll Free: 877.335.PLTW (7589) Local: 317.669.0200 <https://www.pltw.org>

Entrepreneurship Infusion Units

Entrepreneurship Infusion Units may be used to help students achieve additional, focused competencies and enhance the validated tasks/competencies related to identifying and starting a new business venture. Because the unit is a complement to certain designated courses and is not mandatory, all tasks/competencies are marked “optional.”

Appendix: Credentials, Course Sequences, and Career Cluster Information

Industry Credentials: Only apply to 36-week courses

- CAD Assessment
- College and Work Readiness Assessment (CWRA+)
- National Career Readiness Certificate Assessment
- Project Lead the Way End-of-Course Assessments
- Workplace Readiness Skills for the Commonwealth Examination

Concentration sequences: *A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.*

- Aerospace Engineering (PLTW) (8428/36 weeks)
- Civil Engineering and Architecture (PLTW) (8430/36 weeks)
- Computer Integrated Manufacturing (PLTW) (8442/36 weeks)
- Digital Electronics (PLTW) (8440/36 weeks)
- Digital Visualization (8459/36 weeks)
- Engineering Design and Development (PLTW) (8443/36 weeks)
- Principles of Engineering (PLTW) (8441/36 weeks)

| Career Cluster: Science, Technology, Engineering and Mathematics | |
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| Pathway | Occupations |
| Engineering and Technology | Aerospace Engineer Civil Engineer Commercial and Industrial Designer Industrial Engineer Mechanical Drafter Mechanical Engineer Nuclear Engineer Petroleum Engineer |