

Computer Integrated Manufacturing (PLTW)

8442 36 weeks

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Course Description

Suggested Grade Level: 10 or 11 or 12

Prerequisite: 8439

In this specialization course in Project Lead the Way (PLTW), students are taught concepts of robotics and automated manufacturing by creating 3-D designs with computer modeling software and producing computer-controlled models of their designs.

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

- Additive Manufacturing Fundamentals Examination
- Automated Manufacturing Technology Examination
- Business Certificate for Manufacturing Examination
- CAD Assessment
- College and Work Readiness Assessment (CWRA+)
- Electronics Module: AC (EM2) Examination
- Engineering Technology Examination
- Manufacturing Technician Level I Certification Examination
- National Career Readiness Certificate Assessment
- Pre-Engineering/Engineering Technology 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.*

- Introduction to Engineering Design (PLTW) (8439/36 weeks)

Career Cluster: Manufacturing	
Pathway	Occupations
Health, Safety, and Environmental Assurance	Safety Engineer
Logistics and Inventory Control	Logistician
Manufacturing Production Process Development	Electro-Mechanical Technician Industrial Engineer Industrial Engineering Technician Manufacturing Systems Engineer Production Manager Programmer
Production	Automated Manufacturing Technician
Quality Assurance	Quality Control Technician

Career Cluster: Science, Technology, Engineering and Mathematics	
Pathway	Occupations
Engineering and Technology	Commercial and Industrial Designer Computer Hardware Engineer Computer Programmer Electrical Engineer Electro-Mechanical Technician Industrial Engineer Manufacturing Systems Engineer Mechanical Engineer Quality Technician
Science and Mathematics	Secondary School Teacher Technical Writer