

COLLEGE TECH PREP

Computer Aided Design and Manufacturing

This exciting professional program combines CAD (Computer Aided Design) with CAM (Computer Aided Manufacturing). Specialized areas of study include blueprint design, basic dimension in 2-D and 3-D engraving, and geometric construction. Using CAD drawings, students communicated design information to business and industry. This unique program incorporates team teaching, student project and portfolio, as well as flexibility of time and class periods. Three college credits are available at The University of Akron, Summit College.

Skills necessary for success

- Detail-oriented problem solver
- Ability to visualize projects
- Affinity for mathematics
- Positive attitude
- Ability to work independently and as part of a team
- Good analytical thinker
- Ability to manage project deadlines

Professional Pathway

- Architect
- Graphic designer
- Landscape architect
- Fashion designer
- Aerospace machinist
- Aerospace machinist
- Tool design engineer
- CNC programmer
- CAD/CAM systems programmer
- Computer-aided designer or drafter

Program Recommendations

- Excellent attendance record
- Minimum 2.5 GPA
- Geometry

Career interests/helpful background

- Computer technology
- Blueprint design or production
- Animation
- Architecture
- Manufacturing process
- Keyboarding skills



Higher education opportunities

- 3 college credits are available at The University of Akron, Summit College. See page 33.
- Associate's degree
- Bachelor's degree

GRADE LEVEL: 10, 11, 12

LENGTH: One or two years

SCHOOL: Roosevelt

CREDIT:

Placement in appropriate college-level Math 1 Lab 2, Tech Theory 1

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Project Lead the Way

Project Lead The Way is a four-year sequence of courses, which when combined with traditional mathematics and science courses, introduces students to the scope, rigor and discipline of engineering in high school. Three core courses—Introduction to Engineering Design (freshman year); Principles of Engineering (sophomore year) and Digital Electronics (junior year)—as well as a junior-year elective (select from Aerospace or Biotechnical Engineering, Civil Engineering and Architecture, Computer Integrated Manufacturing or Fuel Cell Technologies) and a senior-year capstone course (Engineering Design and Development) make up the pathway. Upon successful completion of each course and passing of a national test, students can earn up to 6 college credits at participating universities.

Higher education opportunities

- 6 college credits available at The University of Akron, Summit College. See page 34.
- Associate's degree
- Bachelor's degree

SCHOOL: Tallmadge students only who are in the College Prep/Honor's Diploma/AP Program pathway