

# Professional CAD/Manufacturing Technologies



This exciting professional program combines CAD, Computer Aided Design, with Manufacturing Technologies. Students will use CAD and CNCe<sub>3</sub> PRO software to learn the skills needed to explore and expand their areas of interest in this career field. Specialized areas of interest include architecture, construction, art and design, polymers, fashion design and industrial systems. This unique program incorporates team teaching, student project and portfolio, as well as flexibility of time and class periods.

**GRADE LEVEL:** 10, 11, 12  
**LENGTH:** One or two years  
**SCHOOL:** Roosevelt

**CREDIT:**  
Geometry (optional) 1  
Lab 2, Tech Theory 1

## 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
- Methodical and accurate worker
- Good analytical thinker
- Ability to manage project deadlines

## Professional Pathway

- Architect
- Graphic designer
- Landscape architect
- Fashion designer
- Computer-aided designer or drafter
- Architectural, civil or mechanical drafter

## Program Requirements

- Excellent attendance record
- Minimum 2.5 GPA

## Career interests/helpful background

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

## Higher education opportunities

- Associate's degree
- Bachelor's degree

## 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 12 college credits at participating universities.

## Higher education opportunities

- Associate's degree
- Bachelor's degree

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