



Engineering and Design Academy

Pathways: PLTW Engineering, Precision Machining, Drafting and Design, and Robotics and Automation

| Grade | Required Academy Courses | | | | Suggested Academy Electives |
|-------|--|---|-----------------------------|---------------------------------|--|
| | PLTW Engineering Pathway | Precision Machining Pathway | Drafting and Design Pathway | Robotics and Automation Pathway | |
| 9 | Freshman Seminar AND Introduction to Engineering | Freshman Seminar AND CAD/Design 1-2 | Freshman Seminar | Computer Science Essential | Journalism Speech and Debate |
| 10 | Introduction to Engineering OR H. Principles of Engineering | Machine Tool 1-2 AND Principles of Machining/ Blueprint Reading | CAD/Design 1-2 | Intro to Robotics 1-2 | Chemistry (H) Physics 1-2 (H) AP Physics 1 AP Environmental Science |
| 11 | One or More: H. Civil Engineering and Architecture; H. Digital Electronics; H. Computer Integrated Manufacturing | Machine Tool 3-4 | CAD/Design 3-4 | Robotics Concepts 3-4 | Sociology Psychology African American History Omaha History Foreign Language Performing and Fine Arts |
| 12 | H. Engineering Design and Development | CNC AND Manufacturing 1-2 | CAD/Design 5-6 | Advanced Robotics Concepts 5-6 | Other Engineering and Design Academy Pathway Courses |

Career and Technical Student Organizations:
SkillsUSA, SAME, ACE

Work-Based Learning Experience
Round Tables, Job Shadowing, Internships, Industry Tours, Guest Speakers, Industry Interviews

Industry Certifications
OSHA, Autocad Certification, FANUC

Available Advanced Placement and Dual Credit Opportunities
AP Language and Composition, H. Technical Communication, AP US History, AP Human Geography, AP World History, AP Government, AP Calculus, AP Statistics, H. Calculus 3/Differential Equations, H. Personal Finance, AP Physics, AP Chemistry, Precision Machining Pathway Courses