Interested in how things are designed and manufactured?



Solve industrial design challenges using robotics, 3D design and industry-grade software. Get an insider's view of how engineers apply mathematical skills and scientific knowledge to solve real-world problems.

In-Demand Engineering Occupations

Minnesota Salary Range: $48,267 - 125,044

Certifications
Commercial Drone Operator
CNC Programmer

Associate Degree
Clinical Laboratory Technician
Drone Imaging Specialist
Calibration & Engineering Tech

Bachelor's Degree
Mechanical Engineer
Electrical Engineer
Industrial Engineer

Course Numbers	Course Name	Credits	Meets Grad Requirement	Articulated College Credit
95406	3D Design	1.0	Elective	Yes

Do you like solving problems? In this course explore modern prototyping tools including 3D printers and scanners, laser engravers, and a variety of other lab tools to through individual and small group projects. Special attention is placed on 3D computer modeling to design, produce, and evaluate innovative products.

95416	Physics of Engineering	1.0	Elective	Yes

Discover mechanical engineering! Through hands-on projects advance your skills and understanding of engineering, with particular focus on systems and manufacturing processes that keep pace with today's ever-changing technology. Students take on the role of engineers and technicians as they apply their math, science, and technology skills to solve problems. Discussions cover the potential social and political benefits and consequences of technological change.

95426	Digital Electronics	1.0	Elective	Yes

Smart circuits are present in virtually all aspects of our lives (i.e., computers, medical devices, and digital electronics)! Study and develop circuit design skills; application of electronic logic circuits and devices and use of Boolean logic while you advance your understanding of basic circuits and electricity concepts through teamwork, communication methods, engineering standards and technical documentation.

95506	Architectural Design	1.0	Elective	Yes

Ever wondered about what it took to design and build the city you live in? In this course you will take on the role of architect and civil engineer as you learn about residential and commercial buildings, site design and development, and standard engineering practices; develop skills in engineering calculations, technical representation, design documentation, and 3D architectural design.

95906	Engineering Capstone	1.0	Elective	Yes

Apply your engineering know-how and entrepreneurial skills in this capstone course. Design a patentable engineering product - initial concept through prototype and present your prototype to industry and manufacturing professionals.

91639 91640	Robotics Drone Technology	1.0	Elective	Yes

Robotics - 91639
Explore how robots solve real world problems. Learn about basic electronic control, mechanics, and elements of advanced programming logic. Develop problem solving, teamwork, and project management skills.

Drone Technology - 91640
Become a certified commercial drone operator! Immerse yourself in key Federal Aviation Administration (FAA) knowledge areas - aviation weather, crew resource management, airport operations. Student will also learn coding, photo/videography techniques, and customer relations in the context of commercial drone operations.