

DESIGN AND ENGINEERING TECHNOLOGY

ASSOCIATE OF APPLIED SCIENCE (AAS) - 60 CREDITS

About this program

The Design and Engineering Technology program prepares students for employment in a wide variety of engineering-related disciplines. Students are trained across multiple two- and three-dimensional software platforms to generate drawings of parts, assemblies and layouts, as well as other manufacturing and construction-related documentation specifically required by employers. The curriculum incorporates 3D printing, 3D scanning and rapid prototyping as tools for taking student designs from computer models to three-dimensional solids. Graduates of the program enter the workforce as mechanical drafters, designers and engineering technicians. This degree also allows students to continue their education in a baccalaureate program at participating four-year institutions.

Program outcomes

1. Produce and interpret engineering drawings and models using multiple software packages and various design methodologies, including two-dimensional layouts, three-dimensional layouts and designs, and three-dimensional printed solid models.
2. Demonstrate a knowledge of processes and materials utilized in modern manufacturing, tool design, product design and rapid prototyping.
3. Effectively communicate graphically, orally and with written communication skills in a professional manner.
4. Function effectively as part of a design team to complete projects while following and maintaining industry standards.
5. Demonstrate knowledge of computer numerical control concepts related to industrial machining, 3D printing and CAD/CAM operations.
6. Perform the math required to accurately calculate scales, parameters, and necessary formulas for communicating and documenting design concepts.
7. Apply critical thinking concepts to identify and solve design concerns for industry-specific projects.

Curriculum overview

Crd	Requirement type
Total	

Developmental courses note: A student may be required to enroll in developmental courses in reading, writing and math. A student's scores on the Accuplacer assessment will determine enrollment in developmental courses. The purpose of developmental courses is to prepare students for the demands of a college-level curriculum. *Credits may vary.*

Accreditation: Minnesota State Community and Technical College is accredited by the Higher Learning Commission, a regional accreditation agency recognized by the U.S. Department of Education. The Higher Learning Commission 230 South LaSalle Street, Suite 7-500 Chicago, IL 60604-1411 <http://www.ncahigherlearningcommission.org> Phone: 312.263.0456 / 800.621.7440

Curriculum requirement details

Required courses

Other requirements or restricted electives



Course summaries



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Program Plan — ""

Locations:

