

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 manufacturing processes and materials utilized in modern manufacturing.
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 communicate and document design concepts.
7. Apply critical thinking concepts to identify and solve design concerns for industry-specific projects.

Curriculum overview

Crds	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



DESIGN AND ENGINEERING TECHNOLOGY

ASSOCIATE OF APPLIED SCIENCE (AAS) - 60 CREDITS

Program Plan — ""

Locations:

