

Computer Aided Drafting (CAD)

Degree Type

Certificate

Type

Career

Division of STEAM

Associate Dean: Bradley Cole

Drafting is an intensive program emphasizing the development of manual and computer aided (CAD) drafting skills. Graduates will have hands on knowledge of machining process for the creation of machine components from raw stock to quality control inspection using the ANSI standard for geometric dimensioning and tolerance. Should students decide to continue their education in the pursuit of an A.A.S degree in technology, the majority of these courses apply directly to the A.A.S. degree programs in Mechanical Technology: CAD Design, Manufacturing, and Machine Tool Technology as directed below.**

Graduates will be able to:

- Develop skills to use AutoCAD and SolidWorks to create working drawings to expected industry standards.
- Produce 2-D drawings and 3-D models for import into computer assisted manufacturing (CAM) software for computer numerical control (CNC) machining program generation;

While not a specific program requirement, in order to graduate from this program students must demonstrate the writing skills necessary to enter ENGL 1010 (College Composition I).

Program Requirements

Item #	Title	Credits
CADD 1700	Computer Aided Drafting I	3
CADD 2710	Computer Aided Drafting II	3
MACH 1040	Precision Machining I	5
MECH 1050	Engineering Graphics I	3
MECH 1550	Engineering Graphics II	3
MECH 1560	CNC Programming	3
MECH 1570	Dimensional Metrology	3
TECH 1120	Spreadsheet Applications in Technology	1
	MATH 1230 or higher	3
	Computer Aided Drafting (CAD) Elective	3
	Total Credits	30

Course Sequencing

First Semester

Intended as a guide for academic planning. It need not be followed exactly or completed in two semester.

Item #	Title	Credits
	MATH 1230 or higher	3
MECH 1050	Engineering Graphics I	3
TECH 1120	Spreadsheet Applications in Technology	1
MACH 1040	Precision Machining I	5
CADD 1700	Computer Aided Drafting I	3

Second Semester

Item #	Title	Credits
MECH 1550	Engineering Graphics II	3
MECH 1560	CNC Programming	3
MECH 1570	Dimensional Metrology	3
CADD 2710	Computer Aided Drafting II	3
	Computer Aided Drafting (CAD) Elective	3

Footnotes

*Based on placement, students might be required to successfully complete preparatory course(s) before attempting further course or program requirements. It is essential to discuss this with an advisor.

*Elective: Select from ENGL 1010; MATH 1240; GEOG 1210; and any CADD, CRST, ELEC, MACH, MECH, MFGT, TECH course. *Mechanical drawing experience is recommended.

**21 of the 30 credit hours of this program apply towards the specific 64 credit requirement of the Machine Tool Technology A.A.S. program allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.

**24 of the 30 credit hours of this program apply towards the specific 64 credit requirement of the Mechanical Technology: CAD Design A.A.S. program allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.