



Computer Aided Drafting (CAD)

Certificate, Career program

Division of Math, Physics, Technology & Engineering Science, Associate Dean: Bradley Cole

Department Chair: John Longwell

Drafting is an intensive program emphasizing the development of manual and computer (CAD) drafting skills. The mission of this program is to equip graduates with the skills to create working drawings using both AutoCAD and SolidWorks to expected industry standards. In addition, graduates will be able to produce 2-D and 3-D drawings for import into computer assisted manufacturing (CAM) software for computer numerical control (CNC) machining program generation.

Graduates will have the skills necessary to create working drawings of parts and machines, either manually or using a CAD program. They will have a working hands-on knowledge of the machining process from the creation of machine components from raw stock to quality control inspection using the ANSI standard for geometric dimensioning and tolerancing. Should students decide to continue their education in the pursuit of an A.A.S. degree in technology, all of these courses apply directly to the A.A.S. degree programs in Mechanical Technology: CAD Design, Manufacturing, and Machine Tool Technology.

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. Based on assessment, students may need to successfully complete ENGL 0950 and/or ENGL 0990. It is essential to discuss this with an advisor.

For program assistance, see an advisor.

High school or equivalent preparation required: Mechanical drawing. Students who don't have this preparation will be able to get it here, but it may take longer to complete the program.

Program Requirements

Technical Concentration (CADD 1700, 2710; MACH 1040; MECH 1050, 1550, 1560, 1570; TECH 1120)	24
Mathematics (MATH 1230 or higher)*	3
Electives (see list below)	3
Total hours	30

*Based on placement, students may be required to take MATH 0960, Basic Math Skills, before taking a math credit course.

Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in two semesters.

First Semester

Mathematics (MATH 1230 or higher)	3
Engineering Graphics I (MECH 1050)	3
Spreadsheet Applications in Technology (TECH 1120)	1
Precision Machining I (MACH 1040)	5
Computer Aided Drafting I (CADD 1700)	3

Second Semester

Engineering Graphics II (MECH 1550)	3
CNC Programming (MECH 1560)	3
Dimensional Metrology (MECH 1570)	3
Computer Aided Drafting II (CADD 2710)	3
Electives	3

Electives: Select from ENGL 1010; MATH 1240; and any CADD, CRST, ELEC, MACH, MECH, MFGT, TECH course.