

### Program Information

The Anoka Technical College Mechanical CAD Operator certificate is a 25-credit program that consists of technical courses designed to develop skills in mechanical drafting.

In addition to drafting and detailing skills, the students receive training in related areas such as industrial materials, manufacturing methods, and professional communication. Students also receive hands-on training in Anoka Technical College’s computer aided drafting lab. (AutoCAD, Inventor, ProE/Creo, and Solidworks)

The primary goal of the Mechanical Drafting and Design program is to provide all graduates with the solid technical foundation necessary to ensure their success in a wide variety of employment opportunities.

### Program Learning Outcomes

By completing this program, students will achieve the following learning outcomes.

1. Apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities.
2. Apply written, oral, and graphical communication in both technical and non-technical environments; and identify and use appropriate technical literature.
3. Understand the need for and an ability to engage in self-directed continuing professional development.
4. Commit to quality, timeliness, and continuous improvement.
5. Demonstrate knowledge and technical competency appropriate to the objectives of the program in engineering materials, applied mechanics, and manufacturing methods.
6. Demonstrate knowledge and technical competency appropriate to the objectives of the program in applied drafting practice emphasizing mechanical components and systems, as well as fundamentals of descriptive geometry, orthographic projection, sectioning, tolerancing and dimensioning, and basic computer aided drafting and design with technical depth in at least one of these areas.

### Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English, and/or reading courses with a “C” or better.

### Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

### Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- [Minnesota Transfer](http://www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search): (www.mntransfer.org/students/plan/s\_agreements.php?numResults=25&archive=false&from\_inst=70&from\_prog=&to\_inst=&Search=Search)
- [Anoka Technical College transfer student](http://www.anokatech.edu/BecomeStudent/Transfers.aspx) (www.anokatech.edu/BecomeStudent/Transfers.aspx)

### Industry Information

Anoka Technical College Mechanical Drafting and Design Technology program graduates find employment with manufacturing companies, engineering firms, electro-mechanical companies, and contract firms. Mechanical Drafting and Design Technology graduates have the necessary knowledge and an excellent foundation to begin their careers as mechanical drafters in engineering departments that design and manufacture hard goods products of every description. Most mechanical drafters begin as detail drafters, making the drawings required for the manufacture of products. Mechanical drafters can advance to supervisory positions within the department or may advance to assistant engineers as they gain experience. Other areas of advancement include purchasing and sales.

### Wages/Outlook/Advancement

Wage information is available from the [Minnesota Department of Employment and Economic Development](https://mn.gov/deed/job-seekers/job-outlook/) (https://mn.gov/deed/job-seekers/job-outlook/).

### Gainful Employment

Follow this link for a [Gainful Employment Report](#).

### Technical Education: 25 Credits

- MACH 1090 Machining Fundamentals ..... 2
- MECH 1200 Mechanical CAD I ..... 4
- MECH 1216 Drafting Standards ..... 5
- MECH 1229 Materials and Processes ..... 3
- MECH 2074 Solidworks ..... 4
- MECH 2090 Advanced CAD ..... 3

#### Elective Select one (1) 4 credit course:

- MECH 2064 Introduction to Inventor ..... 4
- MECH 2084 Introduction to ProE/Creo ..... 4

*Also see: Mechanical CAD Drafting and Design AAS and Mechanical CAD Drafter diploma*

### Start Dates

Fall Semester.....August  
Spring Semester .....January\*\*

**\*\*Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.**

**(continued)**

2019-2020

# Mechanical CAD Operator

Certificate

### Faculty Contact

[Paul Klevann](mailto:Paul.Klevann@anokatech.edu)..... 763-576-4188

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or [EnrollmentServices@anokatech.edu](mailto:EnrollmentServices@anokatech.edu)

### Sample Program Sequence

Full Time

	Fall Semester	Spring Semester
<b>1<sup>st</sup> YEAR</b>	MECH 1200 ..... 4	MACH 1090..... 2
	MECH 1216 ..... 5	MECH 1229 ..... 3
	MECH 2064/2084 ..... 4	MECH 2074 ..... 4
	<b>*TOTAL ..... 13</b>	MACH 2090..... 3
		<b>*TOTAL ..... 12</b>