



To Register for **SYNERGY Academy**,
a FREE program funded by the
Winona Area Chamber and
developed in partnership with
MSCS, go to:



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SYNERGY
ACADEMY



Learn Here. Work Here. Earn Here.

2022-23

PROGRAM GUIDE

COMPUTER AIDED DRAFTING (CAD) TECHNOLOGIES

• • OVERVIEW

Employment opportunities in the CAD Design field abound. A degree from our CAD program will prepare you for with specific skills employers are looking for. Solidworks, inventor, Google SketchUP, Autocad — they're all here and you'll learn how to apply these industry-standard software programs on a project basis just as you will on the job.

Have a busy schedule or just like to work at your own pace? The online CAD Design Technologies Program is flexible enough to ensure you develop the skills employers demand.

CAREER OPPORTUNITIES

- Mechanical Designers
- Plant Designers
- Mechanical Drafters
- CAD Technicians

JOB PLACEMENT
NEARLY 100%

100% ONLINE

• • PROGRAM HIGHLIGHTS

- Courses are taught using state of the art CAD 3D Parametric software
- Excellent training for self-starters
- CAD Drafters/Designers are in constant demand
- The courses are focused on developing your skills for employment
- Instructors are licensed because of their experience in the drafting and design field

• • CERTIFICATES AVAILABLE

BASIC DRAFTING TECHNOLOGIES — 16 CREDITS

Course No	Course Name	Credits
Spring		
MDAD1241	Solidworks	3
MDAD1250	Print Reading	3
MDAD1252	Working Drawings 1 (Tech Elective)	3
Semester Total		9
Fall		
MDAD1251	Manufacturing Processes	3
MDAD1204	Autocad	3
MDAD1253	Working Drawings 2 (Tech Elective)	3
Semester Total		9
Credit Total Shown		18
Total Required Credits		16

COMPUTER AIDED DRAFTING (CAD) TECHNOLOGIES — 9 CREDITS

Course No	Course Name	Credits
Spring starts can finish in one semester		
MDAD1204	Autocad	3
MDAD1241	Solidworks	3
MDAD1250	Print Reading (Sugg. Tech Elective)	3
Semester Total		9
Total Required Credits		9

CNC MACHINE TOOL • • • • • • • • • •

• • OVERVIEW

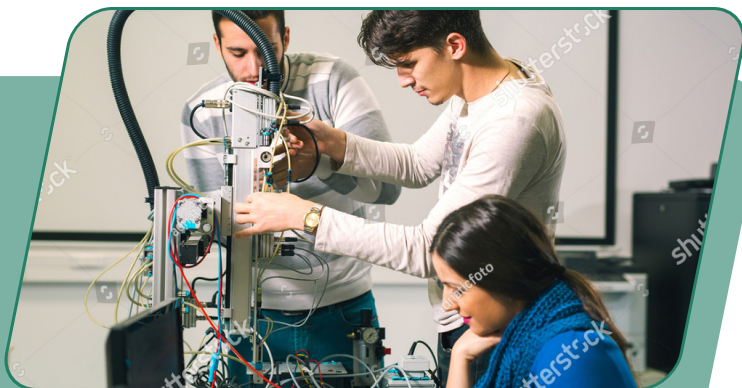
The MSCS CNC Machine Tool Program has a strong emphasis on CNC operation, programming, and 3D modeling. You will learn to produce a CAD 3D model, program a CNC machine with manufacturing lab is equipped with 10 CNC machines, including two 2019 Hurco vertical mills, two 2019 Doosan lathes and one 2020 Haas toolroom mill.

The curriculum at MSCS is based on the philosophy that hands-on is the best way to learn CNC operations and programming.

CAREER OPPORTUNITIES

- Micro Machining
- Medical Machining
- Moldmaker
- Diemaker
- Toolmaker
- CNC Machinist
- Production Machinist
- General Machinist

JOB PLACEMENT
NEARLY 100%





• • **PROGRAM HIGHLIGHTS**

- 20+ stations of Computer Aided Drafting (CAD) and Computer Aided Machining
- (CAM) programming software available for student training
- 70% of coursework is hands-on
- Computer Numerical Control (CNC) machines offer wire electrical discharge machining (edm), turning and milling technology
- Focus is on keeping up with the technology used in the industry
- Employment opportunities are abundant locally as well as regionally

• • **CERTIFICATES AVAILABLE**

ENGINEERING & CNC — 11 CREDITS

Course No	Course Name	Credits
First Semester (Fall)		
CMAE1510	Print Reading	2
MACH1610	Precision Measuring & Gauging	2
MACH1642	CNC Operations 1	2
MACH1643	CNC Operations 2	2
MACH1662	Introduction to CAD/CAM + 3D Printing	3
Semester Total		11
	Total Required Credits	11

ELECTRONICS TECHNOLOGY • • • • •

• • OVERVIEW

The skilled electronics technician has a wide choice of career opportunities. Equipped with knowledge of electric and electronic principles, the graduate may work in design, repair, or installation of industrial, automotive or home electronics, and maintenance of these devices.

An electronic technician is trained to use instruments and equipment in testing, repair and maintenance of electronic systems. The work may include installation, adjustment and correction of malfunctions in computers, communications devices and other electronic equipment.

CAREER OPPORTUNITIES

- Electronic System Installation & Maintenance
- Manufacturing System Installation & Maintenance
- Electronic Engineering Technician
- Computer Equipment Repair & Maintenance
- Wireless Communication Systems
- Installation & Maintenance
- Technical Field Service & Sales
- Security System Technician
- Residential Electronics Systems Integrator

JOB PLACEMENT
100%

• • PROGRAM HIGHLIGHTS

- Broad spectrum of career opportunities
- Current technology is implemented in the curriculum
- 50% of the class work is hands-on
- Our instructors stay current in the electronics field
- Electronics technicians play a critical role in technology

• • CERTIFICATES AVAILABLE

BASIC ELECTRONICS — 9 CREDITS

Course No	Course Name	Credits
First Semester		
ELEC1202	Introduction to DC Electricity	2
ELEC1204	Introduction to AC Electricity	2
ELEC1209	DC Theory & Circuits	2
ELEC1212	Digital Electronics 1	3
Total Required Credits		9

