SYNERGY
ACADEMY

Learn Here. Work Here. Earn Here.

2022-23

PROGRAM GUIDE

What is SYNERGY ACADEMY?

Our purpose is to be a powerful connecting force influencing worker skills in preparation for employer needs by creating immediate pathways of opportunity, momentum, and transferrable skills. Synergy educational pathways are focused on fields correlating with industry need and employment options in the greater Winona area.

SYNERGY ACADEMY is available to all participants at **NO COST! Register Today!**

WHO?

Students from any school (including those who home school) in the region qualify for SYNERGY programming at NO COST to them!

We don't just bring our member businesses to the table, at WACC's **SYNERGY ACADEMY,** we bring businesses to your table, your school, your lab, your shop. **SYNERGY is EVERYWHERE.**

Minnesota State College Southeast is our program's cornerstone – leading the charge in unique and impactful educational programming.

As the leader in workforce development, business advocacy and entrepreneurship, the **Winona Area Chamber of Commerce** is proud to fund Synergy's efforts to connect business with locally educated program participants to bring to action our primary goal, allowing individuals to

LEARN HERE & EARN HERE

PROGRAMS AVAILABLE

- Computer Aided Drafting (CAD) Technologies
- CNC Machine Tool
- Electronics Technology
- Health and Human Services
- General Education Bundle
- Construction Technology

SYNERGY ACADEMY

CAD TECHNOLOGIES

OVERVIEW

Employment opportunities in the Computer Aided Drafting (CAD) design field abound. A degree from our CAD program will prepare you 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 and program a CNC machine. Our manufacturing lab is equipped with 11 state-of-the-art CNC machines, including 5 vertical mills and 6 lathes.

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

This program has evening course offerings.

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)
- 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.

This program has evening course offerings.

CAREER OPPORTUNITIES

JOB PLACEMENT 100%

- 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

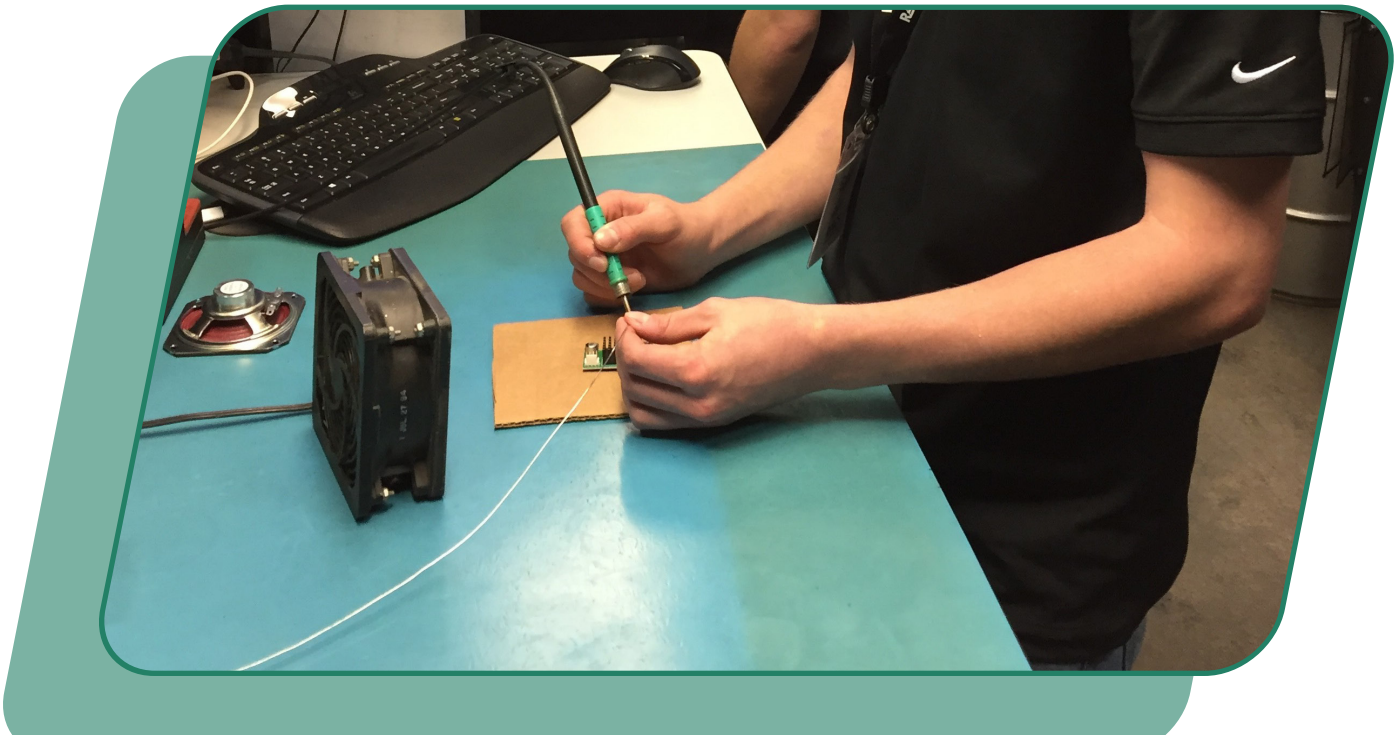
PROGRAM HIGHLIGHTS

- 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**



HEALTH AND HUMAN SERVICES

OVERVIEW

Begin a rewarding career in health care or human services. In these course core bundles, you can embark on a pathway in the healthcare and human services fields. They meet the pre-requisites for a broad field of majors including community health, nursing, pre-medicine, allied healthcare management, or a field in the psychology and human services area.

CAREER OPPORTUNITIES

- Licsensed Practical Nurse (LPN)
- Associate of Science & Nursing - Registered Nurse (ASN)
- Exercise Science (ES) Transfer Pathway
- Health Science (HS) Broad Field
- Radiography (RAD)

PROGRAM HIGHLIGHTS

- Narrow your focus, but keep your options open within the field of healthcare or human services
- Program is focused on preparing students for a successful career in Health Science Broad Field that creates a transferable pathway
- Fully transferrable to all MN State two- and four-year colleges and universities
- Small class sizes with ample personal attention and feedback

PRE-REQUISITES AVAILABLE

LPN/ASN/RADIOGRAPHY/EXERCISE SCIENCE TRANSFER PATHWAY — 6/7 CREDITS

Course No	Course Name	Credits
HLTH1098	Nursing Assistant (LPN/ASN)	3
BIOL1200*	Human Biology (LPN/ASN/ES/RAD)	4
BIOL1201*	Intro to Biology (HS)	4
MATH1025**	Algebra	2
MATH1220	College Algebra	3
	Total Required Credits	**6/10**

*Recent HS Biology with Instructor approval could also qualify as the pre-requisite
**Pre-requisite for College Algebra or test placement into College Algebra

CORE HEALTHCARE COURSE BUNDLE

LPN/ASN/RADIOGRAPHY/HS BROAD FIELD/EXERCISE SCIENCE TRANSFER PATHWAY — 11 CREDITS

Course No	Course Name	Credits
BIOL2515	Anatomy and Physiology 1	4
BIOL2516	Anatomy and Physiology 2	4
ENGL1215	College Writing	3
	Total Required Credits	**11**

PSYCHOLOGY OPTION — 3 CREDITS

Course No	Course Name	Credits
PSYC1115	Lifespan Psychology (LPN/ASN/HS)	3
PSYC1110	Intro to Psychology (ES Transfer Path)	3
	Total Required Credits	**3**

GENERAL EDUCATION BUNDLE

OVERVIEW

This bundle would transfer to 12 MSC Southeast Transfer Pathways in Accounting, Business, Criminal Justice, Early Childhood Education, Economics, English, Exercise Science, History, Political Science, Pre-Social Work, Psychology, and Sociology.

The bundle would also transfer to the Associate of Arts degree in Liberal Arts and Sciences, as well as to the Associate of Science degree in Individualized Studies.

CORE GEN ED BUNDLE — 9 CREDITS

Course No	Course Name	Credits
First Semester		
CHEM1122*	Environmental Chemistry	3
COMM1218**	College Speech	3
COMM1228**	Interpersonal Communications	3
ENGL1215	College Writing 1	3
	Total Required Credits	**9**

***Pick CHEM1225 Introduction to Forensic Science for Criminal Justice Pathway**

****Pick one of these depending on Transfer Pathway preferred**

CORE GEN ED BUNDLE — 9 CREDITS

Course No	Course Name	Credits
Second Semester		
ENGL2525	College Writing 2	3
MATH1220*	College Algebra	3
MATH1230*	Intro to Statistics	3
	Elective based on transfer pathway	3
	Total Required Credits	**9**

***Pick one of these depending on Transfer Pathway preferred**

CONSTRUCTION TECHNOLOGY

OVERVIEW

Construction tradesmen and women make up the largest group of building-trade workers. They work quickly, accurately, and efficiently to maximize use of time and materials. With a shortage of these qualified professionals in today's job market, graduates of MSC Southeast's Construction Technology program can expect to find many employment opportunities in Southeast Minnesota and beyond.

At MSC Southeast, students gain hands-on skills in the construction lab and on-site in a real-world environment. In addition, they gain experience with the tools, materials, methods, and standard practices of the trade.

CAREER OPPORTUNITIES

- Commercial & Residential Carpentry
- Construction Management
- Small Business Owner
- Cabinet Making
- Concrete Finisher
- Insulator
- Lumberyard

JOB PLACEMENT 100%

PROGRAM HIGHLIGHTS

- Excellent job placement history
- Huge demand for quality tradesmen and tradeswomen
- Learn new technologies such as geosystems, solar, and geothermal
- Curriculum integrates BPI standards for energy efficiency
- Work hands-on with non-profit organizations to better the community
- Training can go in several different directions

CONSTRUCTION COURSE BUNDLE — 5 CREDITS

Course No	Course Name	Credits
First Semester		
CARP1105	Residential Construction 1	2
CARP1120	Architectural Drawings 1	1
CARP1100	Cabinetry	2
	Total Required Credits	**5**

CONSTRUCTION COURSE BUNDLE — 2 CREDITS

Course No	Course Name	Credits
Second Semester		
CARP1205	Residential Construction 2	1
CARP1220	Architectural Drawings 2	1
	Total Required Credits	**2**

MINNESOTA STATE COLLEGE SOUTHEAST
A TECHNICAL & COMMUNITY COLLEGE

WINONA AREA CHAMBER OF COMMERCE

FOR MORE INFORMATION ABOUT SYNERGY ACADEMY, A PSEO PROGRAM OFFERED THROUGH A PARTNERSHIP WITH THE WINONA AREA CHAMBER OF COMMERCE AND MINNESOTA STATE COLLEGE SOUTHEAST, REACH OUT TO ONE OF THE TEAM MEMBERS BELOW.

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