

Mechanical Maintenance

Technical Diploma

Introduces students and builds basic skills to install, maintain, and operate hydraulic, pneumatic, mechanical, and electronic automated equipment used in manufacturing industries. Students will be introduced to diagnostics and repair of equipment components. Upon completion of the certificate, students will be eligible for entry level positions in manufacturing as production workers or maintenance technicians.

Program Outline

TERM 1		
Course #	Course Title	Credits
3180130400	Applied Communications Writing Focuses on writing skills related to employment. Students write and edit letters, resumes, memos, and brief reports.	2.00
1046210300	Hydraulic Components and Schematics Students will learn how to operate the Basic Hydraulic Trainer and draw the schematic symbols in a circuit.	1.00
1046210500	Fixed Displacement Pumps Students will learn about Pascal's law and the relationship between pressure, force and area.	1.00
1046210700	Hydraulic Pressure Valves Students will identify different hydraulic valves and use them in an application.	1.00
1046211500	Basic Electrical Circuits Students will learn how to measure voltage, current and resistance in an electrical circuit.	1.00
1046211700	Inductance and Capacitance Students will learn how to define and calculate inductance and capacitance in an electrical circuit.	1.00
1046211900	Analyze Transformers Students will learn how to size a transformer and how to identify the step up and step down transformers.	1.00
3240431700	Automotive HVAC Systems Student will perform general A/C diagnosis and repair. This is part of the Maintenance and Light Repair Certification ASE G1.	1.00
3240435800	HVAC Controls Student will perform diagnosis of HVAC control systems. This is part of the ASE A7 Certification.	1.00
3240435600	HVAC System Service Student will perform refrigerant recovery, recycling, and handling procedures. Student will perform A/C system component replacement and diagnosis. This is part of the ASE A7 Certification.	1.00

Course #	Course Title	Credits
3240439600	Automotive Diesel Operation Student will learn diesel engine and fuel system operation and diagnosis.	1.00
3144210500	Welding Fundamentals Welding Fundamentals is designed to introduce students to basic techniques in a wide variety of welding and cutting processes. Learners will assess welds for quality as they make fillet and groove welds in all position on steel while experiencing a range of welding processes including Gas Metal Arc Welding, Shielded Metal Arc Welding, and Flux Core Arc Welding, as well as cutting processes such as OFC and PAC.	3.00
3146212000	Relay Logic used in Hydraulics Students will analyze the use of electricity to control a hydraulic system. Students will learn relay component identification using ladder logic. Using the ladder logic and relay logic, students will connect circuits on a trainer to operate a circuit.	1.00

Total Credits: 16.00

Talk with a Success Coach about the program outline. Together, you will determine if credits you've already earned satisfy any requirements, discuss possible alternative courses, and choose the best classes if you're thinking of transferring.

At A Glance

How You'll Learn

2024 Start Dates

January 8	June 3
February 5	July 1
March 4	August 26
May 6	October 21

[VIEW FULL ACADEMIC CALENDAR](#)

Program Tuition*

\$3,632

Books & Supplies*

\$342

*Total cost for degree completion is estimated by current course requirements, books, and supplies. Tuition and fees are set by the Wisconsin Technical College System and subject to change.

► [Potential Indirect Costs](#)

What You'll Learn

- Practice industry recognized safety practices and guidelines, including the use of personal protective equipment in an industrial operating environment.
- Prepare and maintain documentation of work orders, repair work completed, and safety procedures implemented.
- Install, maintain, troubleshoot and repair industrial machinery and manufacturing equipment, using appropriate tools, materials, and methods.

Your Potential Careers

- Machinery Maintenance Worker
- Machinery Repair

Median Annual Salary

\$40,275	\$44,428	\$40,938
Local	State	National

EMSI 2022.1

Get Started

Your application can be submitted online, it takes just a few minutes to complete.

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