LAKESHORE COLLEGE

MAINTENANCE MECHANIC

Program Number 31-462-2
Technical Diploma • Two Terms

ABOUT THE PROGRAM

Machines are important in our lives—directly or indirectly. Broken or inefficient machines slow the pace of manufacturing and, ultimately, profits. To remain competitive in today's fast-paced industrial/manufacturing environment, equipment needs to be maintained to run at peak performance. If you like to troubleshoot problems, put theory into practice, to work hands-on, and have interests in mechanical processes, a career in industrial maintenance is your key to success.

PROGRAM OUTCOMES

- Demonstrate safe work procedures.
- Install industrial equipment.
- Maintain industrial equipment.
- Troubleshoot industrial equipment.
- Repair industrial equipment.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

Lakeshore credits transfer to over 30 universities. For more information visit lakeshore.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Complete Get Started at Lakeshore appointment:
    - Application Check-in
    - College Orientation Overview
    - 1st Time Program Registration

**Submit high school transcripts, college transcripts, and test scores (optional, highly recommended). Official transcripts will be needed for transferring college credit(s) and for financial aid purposes.*

ACADEMIC PREPAREDNESS/FUTURE SEMESTER ENROLLMENT STEPS

If applicable, complete program-specific academic preparedness requirements and enrollment steps prior to enrolling in occupational or core courses. Students will be notified if there is a program waitlist. View the college's program webpage for details: https://lakeshore.edu/programs-and-courses/career-areas/manufacturing/maintenance-mechanic

APPROXIMATE COSTS

$152.85 per credit tuition (WI resident) plus $9.17 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit lakeshore.edu/Financial-Aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit lakeshore.edu/Financial-Aid for more information.

SPECIAL NOTE

- Students may need to supply their own safety glasses and welding gloves.
- Learn when you want. Progress at your own pace. Receive personalized coaching and support. The full CBE definition may be found at lakeshore.edu/cbe.

RELATED PROGRAMS

- Millwright Apprenticeship
- Electro-Mechanical Maintenance Technician
- Electro-Mechanical Automation Technology

CONTACT

Lakeshore College Recruiter
920.693.1366 • Recruitment@lakeshore.edu

Catalog No.	Class Title	Credit(s)
	Term 1	
10804113	College Technical Math 1A	3
10462207	Tools and Measurement*	1
10462209	Maintenance Introduction*	1
10462211	Maintenance Print Reading*	2
10462127	Bearings and Lubrication	2
10420294	Machine Tool Introduction*	2
10442100	Safety and Welding Fundamentals*	1
10457203	Maintenance Fabrication*	1
10462215	Layout and Rigging*	1
		14
	Term 2	
10620255	Hydraulics and Pneumatics*	3
10462117	Power Transmission	3
10462123	Pumps, Fluid/Air Handling	2
10462121	Troubleshooting and Machine Repair	3
31420340	Manual Lathe Operation*	1
31420350	Manual Mill Operation*	1
10801196	Oral/Interpersonal Communication	3
		16
		TOTAL 30

*CBE delivery only
**Calculus 1 is designed for students planning to transition to a 4-year college following Lakeshore program completion in place of 10804113 College Technical Math 1A.

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your academic counselor for details. The tuition and fees are approximate based on 2025-2026 rates and are subject to change prior to the start of the academic year.

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BEARINGS AND LUBRICATION...prepares the learner to properly identify, remove, install, and maintain both plain and rolling element bearings used with either a radial or axial load, including ball, cylindrical roller, tapered roller, linear, and thrust bearings; use manufacturers' resources for proper usage and life of bearings; and look at proper types, properties, and application methods of lubrication. PREREQUISITE: 10462109 Maintenance Intro or 31462309 Industrial Maintenance Intro or COREQUISITES: 10804113 College Tech Math 1A and 10462209 Maintenance Intro

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. Discuss math academic course support with your Counselor.

HYDRAULICS AND PNEUMATICS...prepares the learner to identify hydraulic and pneumatic component symbols and terms, adjust a pressure relief valve, analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. COREQUISITE: 10804113 College Tech Math 1A

LAYOUT AND RIGGING…prepares the learner to perform layout skills for industrial maintenance to include machine layout, proper rigging, installation, and leveling with emphasis on baseline layout, machine rigging and installation, machine leveling, and alignment procedures. PREREQUISITE: 10462109 Maintenance Introduction or COREQUISITE: 10462209 Maintenance Introduction

MACHINE TOOL INTRODUCTION...prepares the learner with the skills to identify basic types of machining processes, follow standard shop safety rules, use semi-precision and precision measuring tools, perform workpiece layout procedures, identify metal composition and classification, follow cutoff machine safety rules, operate vertical and horizontal cutoff machines, follow sensitive drill press safety rules, identify drill press components, interpret attributes of hole-producing tools, and operate a sensitive drill press.

MAINTENANCE FABRICATION...introduces the learner to various types of structural steel, sheet metal, and pipe, and prepares the learner to perform fabrication from assembly prints, including cutting, welding, bending, straightening, and repair. PREREQUISITE: 31442346 Industrial Maintenance Intro to Welding or 31442300 Welding Intro or COREQUISITE: 10442100 Safety and Welding Fundamentals

MAINTENANCE INTRODUCTION…prepares the learner to apply basic safety, mechanics, force, friction, work, and energy; learn terminology related to maintenance; introduction to threaded and non-threaded fasteners and concrete anchoring; learn to use precision measuring tools; introduction to single-phase and three-phase motor wiring. PREREQUISITE: 31462325 Maintenance Tools and Measurement or 10462107 Tools and Measurement or COREQUISITE: 10462207 Tools and Measurement

MAINTENANCE PRINT READING…prepares the learner to read prints; make isometric sketches; interpret orthographic projection drawings, to include sections, surface finishes, and tolerancing.

MANUAL LATHE OPERATION…prepares the learner to perform lathe facing, turning, hole producing and threading operations safely.

MANUAL MILL OPERATION…prepares the learner to perform squaring, slot milling and hole producing using a vertical mill machine safely.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. Discuss reading academic course support with your Counselor.

POWER TRANSMISSION...introduces the learner to belt, chain, and gear drives used in industrial maintenance applications, including v-belts, flat belts, timing belts, conveyor chains, roller chains, bevel gears, worm gears, helical gears, spur gears, couplings, and alignment with emphasis on identification, installation, repair, and maintenance. COREQUISITE: 10462127 Bearings and Lubrication or PREREQUISITE: 10462125 Bearings and Lubrication

PUMPS, FLUID/AIR HANDLING...prepares the learner to identify, install, repair, and maintain common pumps and plumbing applications, including centrifugal pumps, diaphragm pumps, packing and seals, tubing, and installing hose and piping used with fluid and air handling. PREREQUISITES: 10620155 Hydraulics and Pneumatics and 10462119 Power Transmission or COREQUISITES: 10620255 Hydraulics and Pneumatics and 10462117 Power Transmission and 10804113 College Technical Math 1A

SAFETY AND WELDING FUNDAMENTALS...introduces the learner to the world of welding, weld shop safety practices, welding terminology, and welding machine setup to industry standards. Learners will be introduced to the three major welding processes: SMAW, GMAW, and GTAW and will build skills welding with each process in the flat and horizontal positions while using the common welding joints found in industry. The learner will process material using the two major handheld cutting processes - Oxyfuel and PAC.

TOOLS AND MEASUREMENT...prepares the learner to use hand tools, precision measuring instruments, and torque tools.

TROUBLESHOOTING AND MACHINE REPAIR...prepares the learner to perform essential troubleshooting, repair, and preventive maintenance of various machine tools and installations used in industrial maintenance and to integrate the skills learned in the other maintenance courses to perform complete repair of machine tools. PREREQUISITE: 10462119 Power Transmission or COREQUISITES: 10462117 Power Transmission and 10462123 Pumps, Fluid/Air Handling and PREREQUISITE: 10462115 Layout and Rigging or COREQUISITE: 10462125 Layout and Rigging