

ABOUT THE PROGRAM

Introduces the learner to tools, measurement, and prints used in the machining industry as well as hands-on use and application of these concepts to the operation of drills, lathes, mills, and programming.

PROGRAM OUTCOMES

- Apply basic safety practices in the machine shop.
- Interpret basic industrial/engineering drawings.
- Apply basic precision measuring methods to part inspection.
- Perform basic machine tool equipment set-up and operation

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.

**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/academics/certificates/introduction-precision-machining>.

APPROXIMATE COSTS

\$157.45 per credit tuition (WI resident) plus \$9.45 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit <https://lakeshore.edu/paying-for-college/tuition-and-fees>.

FINANCIAL AID

This program is not eligible for financial aid. Talk with your Recruiter about payment options.

SPECIAL NOTE

- Accelerate your learning, earn credit for what you know, and get personalized support to reach your goals. The full CBE definition may be found at lakeshore.edu/CBE.
- This program offers flexible start dates throughout the year.

RELATED PROGRAMS

- Certificate is embedded in the Precision Machining Technology and CNC Automation Technician Technical Diplomas
- Machinist Apprenticeship
- Tool & Die Apprenticeship

CONTACT

Lakeshore College Recruiter
920.693.1366 • Recruitment@lakeshore.edu

Catalog No.	Class Title	Credit(s)
COURSES		
31442350	Metal Manufacturing Processes*	1
31420330	Precision Measuring*	1
31420385	Orthographic Projection Print*	1
31420325	Manufacturing Math*	1
31420338	Drills and Saws*	1
31420340	Manual Lathe Operation*	1
31420350	Manual Mill Operation*	1
31444301	G&M Code Programming*	1
		TOTAL 8

*CBE delivery only

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 2026-2027 rates and are subject to change prior to the start of the academic year.

DRILLS AND SAWS...prepares the learner to interpret the attributes of hole-producing tools, follow drilling machine safety rules, identify components, operate sensitive drilling machine, identify metal composition and classification, follow cutoff safety rules, operate horizontal and vertical cutoff machines.

G&M CODE PROGRAMMING...will have the learner demonstrate an understanding of Computer Numerical Control (CNC) systems, interpret positions in the coordinate system, prepare a cutting tool list, prepare a machining process list, identify, and use common G&M codes, and prepare G&M part programs for machining centers. A basic understanding of cutters used on the mills is necessary to be successful in this class.

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.

MANUFACTURING MATH...prepares the learner to use scientific calculators for the applications of common fraction and mixed number problems, decimal problems, inch and metric conversion problems, basic percentage problems, powers and roots, and pre-algebra problems.

METAL MANUFACTURING PROCESSES...prepares the learner to communicate using proper terminology that is used in industry as it pertains to the use of hand/power tools and measurement. The learner will demonstrate good safety practices while in a workplace environment, demonstrate the proper use of hand and power tools. The learner will complete steel fabrications using hand/power tools and classify and install industrial fasteners. The learner will be introduced to material handling operations by using the overhead crane and forklift.

ORTHOGRAPHIC PROJECTION PRINT...prepares the learner to read prints, make isometric sketches, interpret orthographic projection drawings, to include sections, surface finishes, and tolerancing.

PRECISION MEASURING...prepares the learner to use semi-precision and precision measuring instruments and measurement techniques and use a surface plate as a basis for precision measurements.