

Manual Machinist Certificate - 30 credits

Program Area: Integrated Manufacturing Machine Tool (Fall 2025)

REMEMBER TO REGISTER EARLY

Program Description

This 30-credit certificate trains students to work in a manual machining environment. Students will learn setups in machining, inspection of parts made on vertical mills, lathes, and grinders. Using jigs and fixtures necessary to these parts will be covered as well as the materials to use in manufacturing.

Program Outcomes

- Manufacture mating parts and assemblies
- Perform setups and use milling fixtures to manufacture parts
- Set up and machine compound angles using various processes
- Build jigs and fixtures to complete manufacturing processes
- Manufacture and inspect quality product

Required Courses

Number	Name	Credits	Term
INMG 1400	Introduction to Manufacturing Technology	4	
INMG 1410*	Mechanical Print Reading	3	
CADE 1468*	Solidworks I	3	
MTCC 1600	Engineering Materials	1	
WLDG 1560	Gas Metal Arc Welding I	3	
INMG 1412*	Advanced Mechanical Blueprint Reading	3	
MTCC 1432*	Quality Methods	2	
MTCC 1505*	Surface Grinder I	2	
MTCC 1520*	Cylindrical Grinding	1	
MTCC 1530*	Waterjet Cutting Processes	2	
MTCC 1603*	Turning	2	
MTCC 1604*	Milling	2	
MTCC 2500*	CNC Mill Conversational	2	

Total Credits

30

Pre-program Requirements

Successful entry into this program requires a specific level of skill in the areas of English, mathematics, and reading. Program entry will depend, in part, on meeting the prerequisites listed below:

English/Reading:

- Eligible for ENGL 1106 - College Composition I, or
- Completion of ENGL/READ 0950/0955 (or equivalent or higher). ENGL/READ 0950/0955 may be taken concurrently with Semester I coursework.

Mathematics:

- A score of 250 or higher on the Arithmetic portion of the Accuplacer.

There are other ways to qualify. Visit [Course Placement](http://lsc.edu/course-placement) (lsc.edu/course-placement) to find out more.

For interpretation of test results and selection of appropriate coursework; or general information about the program, admissions, financial aid, and getting started at LSC, contact the [professional advising team](mailto:advising@lsc.edu) (advising@lsc.edu) or 218-733-7601



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For more information about the Manual Machinist Certificate including course descriptions, course prerequisites, and program report, see the [program website](https://www.lsc.edu/degrees/manual-machinist-certificate/) (<https://www.lsc.edu/degrees/manual-machinist-certificate/>)

or

Contact Faculty Advisor [Nathan Zobel](mailto:nathan.zobel@lsc.edu) (nathan.zobel@lsc.edu) at 218-733-6827



MINNESOTA STATE

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