

Machine Operations

Certificate (C184)

Required Courses

MATH 1500**Applied MATH **OR**

Goal 4 MATH Course** 3 cr

MTTS 1110 Principles of Machine Operations I..... 2 cr

MTTS 1120 Machine Operations I 3 cr

MTTS 1121 Machine Operations II 3 cr

MTTS 1130 Print Reading 2 cr

RAST 1109 Computers in Industry 2 cr

RAST 1110 Introduction to Manufacturing..... 2 cr

***Take MATH 1500 if on the certificate or diploma path. Take a Goal 4 MATH course if on the AAS path.*

GRADUATION REQUIREMENT – 17 CREDITS

Description

The Machine Operations Certificate program at Central Lakes College provides a comprehensive foundation to get you started as an introductory machinist suited to work in machine shops where standard blue print reading, layout, milling, turning and measurement skills are needed. Emphasis on shop safety and precision are valued. Hands-on instruction takes place in a state-of-the art machine shop to provide a practical experience. The certificate you earn from CLC will signify your competency with the machining skills necessary for many career opportunities.

Outcomes

By completing this program, students will achieve the following learning outcomes:

- Use proper safety techniques and recognize hazards;
- Recognize different forms of tooling and the proper applications for each;
- Select correct equipment for various machining operations;
- Use and understand proper measurement techniques and procedures; and
- Identify different materials and the unique machining properties that are associated with them.

Pre-Program Requirements

Some courses may require students to meet College Placement Levels in reading, writing, and/or math. See an advisor for more information.

Graduation Requirements

In addition to the program requirements, students must meet the following conditions in order to graduate:

- College Cumulative GPA Requirement: cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0.
- College Technical Core GPA Requirement: cumulative GPA of credits attempted and completed towards the technical core of the diploma or degree must be at least 2.0.
- Residency Requirement: students must complete 25% of their credits at Central Lakes College.

Career & Transfer

The machine operator is often responsible for performing entry-level machine operations. Basic computer numerical control (CNC) operation along with standard manual mill and manual lathe operations are performed. Blueprint reading skills will be utilized. Advancing in this field will require you to gain basic knowledge in fixturing, CNC setup and programming.

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