

The certificate of proficiency and the technical certificate programs give the student the opportunity to earn certificates while completing steps toward an Associate of Applied Science degree.

2025-2026



**TECHNICAL CERTIFICATE PLAN**  
**MACHINING TECHNOLOGY**

**Degree Code: 1495; CIP Code: 48.0510**

All technical certificate-seeking students must meet the freshman assessment and placement requirements.

If deficiencies exist, the student must complete the required CPT courses.

**A 2.0 GPA is required for graduation from the  
Technical Certificate in Machining Technology program.**

**ATTENTION STUDENTS: PLEASE SEE CURRENT CATALOG FOR  
ALL FEES AND CHARGES ASSOCIATED WITH THIS CERTIFICATE.**

Machinists are precision instrument makers who fabricate, modify, or repair mechanical instruments. They may also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, mathematics, metal properties, layout, and machining procedures.

**Student Learning Outcomes for TC Machining Technology Program**

1. Demonstrate ability to read and understand basic engineering drawings.
2. Demonstrate proficiency with precision measurement tools.
3. Exhibit ability to select, maintain, and utilize manual machining equipment.
4. Demonstrate proficiency setting tool and work offsets for various CNC operations.
5. Demonstrate understanding of g-code.
6. Exhibit competency in the setup and operation of CNC machines.

In addition to these program-specific outcomes, students will have demonstrated a proficiency in the following general outcomes:

7. Composition and Oral Communication.
8. Utilization of technology appropriate to degree or field of study.

Name: \_\_\_\_\_  
Advisor: \_\_\_\_\_

Date: \_\_\_\_\_  
Student ID# \_\_\_\_\_

| <u>COURSE CODE</u>                        | <u>COURSE NAME</u>                                  | <u>CREDIT HOURS</u> | <u>HOURS COMPLETED</u> |
|-------------------------------------------|-----------------------------------------------------|---------------------|------------------------|
| <b>General Education (3 credit hours)</b> |                                                     |                     |                        |
| CIS 1053                                  | Computer Essentials                                 | 3                   | _____                  |
| ENG 1003                                  | Composition I (must earn a "C" or better) <b>OR</b> |                     | _____                  |
| ENG 1103                                  | Career Writing (must earn a "C" or better)          | 3                   | _____                  |
| <b>Machining Core (32 credit hours)</b>   |                                                     |                     |                        |
| MACH 1002                                 | Metallurgy                                          | 2                   | _____                  |
| MACH 1004                                 | Introduction to Machining                           | 4                   | _____                  |
| MACH 2004                                 | Machining I                                         | 4                   | _____                  |
| MACH 2014                                 | Machining II                                        | 4                   | _____                  |
| MACH 2018                                 | CNC Set-up, Operations and Programming              | 8                   | _____                  |
| TECH 1012                                 | Employment Strategies                               | 2                   | _____                  |
| TECH 1044                                 | Computer Aided Design (CAD)                         | 4                   | _____                  |
| TECH 2154                                 | Industrial Mechanical Systems                       | 4                   | _____                  |

**Program Total 38 Hours**