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.

2026-2027

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.

Program Learning Outcomes for TC Machining Technology Program

1. Identify the different types of metal between Steel, Aluminum, Copper, Brass, and Stainless Steel.
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.
7. Demonstrate ability to read and understand basic engineering drawings.
8. Students will demonstrate employability (soft) skills.

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

9. Composition and Oral Communication.
10. Utilization of technology appropriate to degree or field of study.

Name: _____ Date: _____

Advisor: _____ Student ID# _____

COURSE CODE		COURSE NAME	CREDIT HOURS	HOURS COMPLETED
General Education (3 credit hours)				
CPSI	10003	Computer Essentials	3	_____
ENGL	10103	Composition I (must earn a “C” or better)	3	_____
Machining Core (32 credit hours)				
MSTE	10002	Metallurgy	2	_____
MSTE	10053	Introduction to Machining	4	_____
MSTE	12074	Machining I	4	_____
MSTE	13074	Machining II	4	_____
MSTE	20038	CNC Set-up, Operations and Programming	8	_____
TECH	10044	Computer Aided Design (CAD)	4	_____
TECH	10132	Employment Strategies	2	_____
TECH	21054	Industrial Mechanical Systems	4	_____

Program Total 38 Hours