



Machine Tool Technology C.A.

Curriculum Code: 1470

Effective: Fall 2021 – Summer 2026

Description

This certificate is designed for an apprentice, pre-apprentice, or person interested in advancing his/her skill set in the machinist or tool & die trade. Technical math, blueprint reading, knowledge of the Machinery Handbook, and metallurgy are just some of the skills and knowledge that are necessary for this type of work. Ideally, this curriculum should be taken concurrently with an industry-based work experience or apprenticeship or in preparation for an apprenticeship as a machinist or tool and die maker.

Additional Information

Students who have already completed ELTE 102 or DCTM 102 or HVAC 102 or WELD 102 with a grade of 2.0 or higher may substitute one of those courses for METS 102.

Contact Information

Contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METD 110	Mechanical CAD Drafting I	4 / 6
METM 108	Machine Tool Operations	4 / 6
METM 112	Introduction to CNC Machining	4 / 6
METM 190	Metallurgy and Heat Treatment	4 / 6
METS 102	Industrial/Construction Safety	2 / 3

Program of Study Required Courses, Limited Choice – *Select four*

Course Code	Course Title	Credit / Billing Hours
MATH 115	Technical Math II	4 / 4
METD 105	PC Applications for Technology	3 / 4
METD 111	Mechanical CAD Drafting II	4 / 6
METD 130	Geometric Dimension/Tolerance	4 / 6
METD 150	Industrial Blueprint Reading	3 / 3
METD 220	Basic Unigraphics/NX	4 / 6
METM 150	Advanced CNC Machining	4 / 6
METM 220	Basic Mastercam	4 / 6
METS 140	Rigging	3 / 4.5
WELD 103	Combination Welding	4 / 6

Total Credit Hours

31-34 credits / 42.5-51 billing hours

Recommended Course Sequence

Semester I	Semester II
METS 102 Limited Choice	METD 110 METM 108

Semester III	Semester IV
METM 112 METM 190	Limited Choice Limited Choice Limited Choice