

LANSING COMMUNITY COLLEGE

CURRICULUM GUIDE

Machine Tool Technology
Certificate of Achievement

Curriculum Code: 1470 (Effective Fall 2009 – Summer 2014)

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.

PREREQUISITES

Students should see *Course Descriptions* or *Course Offerings* for course prerequisite information. See the *Assessment and Placement Testing* section for skills assessment and advising information.

INFORMATION

Contact the Transportation and Engineering Technologies Department, West Campus Building, Room M103, telephone number (517) 483-1339.

REQUIREMENTS (See Notes 1 and 2)

CODE	TITLE	TOTAL: 26 CREDITS CREDIT HOURS
MATH 114	Technical Math I	4
METD 110	Mechanical CAD Drafting I (See Note 1)	4
METM 110	Intro to Precision Machining (See Notes 1 and 2)	4
METM 120	Effective Use/Machine Handbook	4
METM 150	Advanced Precision Machining	4
METM 190	Metallurgy and Heat Treatment	4
METS 102	Industrial/Construction Safety (See Note 3)	2

LIMITED CHOICE REQUIREMENTS

TOTAL: 12 CREDITS

Complete the indicated number of credits from **EACH CHOICE** listed below.

CHOICE 1: Trade Related

12 Credits

MATH 115	Technical Math II	4
METD 105	PC Applications for Technology	3
METD 111	Mechanical CAD Drafting II	4
METD 130	Geometric Dimension/Tolerance (See Note 1)	3
METD 150	Industrial Blueprint Reading	3
METD 220	Basic Unigraphics/NX	4
METM 200	High Speed Precision Milling	3
METM 220	Basic Mastercam	4
METS 140	Rigging	3
WELD 103	Combination Welding (See Note 3)	4

MINIMUM TOTAL

38

NOTES:

1. Basic mechanical drafting skills are necessary to begin this curriculum and may be demonstrated by a score of 80% or better on the Drafting Placement Test or by passing METD 100 with a 2.0 minimum grade.
2. Basic computer skills are necessary to begin this curriculum and may be demonstrated by a score of 80% or better on the PC Applications for Technology Placement Test or by passing METD 105 with a 2.0 minimum grade.
3. Students who have already completed ELTE 102 or HVAC 102 or WELD 102 with a grade of 2.0 or higher may substitute one of those courses for METS 102. Any of these four courses may also be used to fulfill the prerequisite for WELD 103.
4. Course substitutions may be made to this curriculum based on industry education and experience. For more information, please see a program advisor.
5. Students enrolled in this curriculum should also pursue a concurrent industry-based work experience or apprenticeship.

SUGGESTED COURSE SEQUENCE

Students should see course descriptions to find out when departments plan to offer courses. Students who for any reason are unable to follow the course sequence suggested below (for example, those who are part-time, have transferred in courses from another school, or have prerequisites to fulfill) should contact an academic advisor or counselor for help with adjustments.

I	II	III
MATH 114	METM 120	Lim. Ch.
METD 110	METM 150	Lim. Ch.
METM 110	METM 190	Lim. Ch.
METS 102	Lim. Ch.	