

LANSING COMMUNITY COLLEGE

Computer, Engineering/Manufacturing Industrial Technologies

Curriculum Code: 1800
(Effective Fall 2018 –
Summer 2023)

Computer Automated Design C.A. Pathway

This program prepares individuals to apply technical skills and computer software and hardware to the design and manufacturing of machined components relating to various industries. Students receive instruction in the use of engineering graphics, two-dimensional and three dimensional engineering design graphics, parametric modeling, computer numerical control programming, 3D printing, and additive manufacturing. Industry 4.0 processes are applied inside the CAD system to stage products for metrology inspection, metallurgy, geometric dimensioning and tolerancing, tools for production, and engineering changes. Employment possibilities include entry-level positions in engineering firms, consulting firms, and manufacturing companies that make automotive, defense industry, special machinery, and medical components, to name a few.

For More 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.

Semester I	Course Title	Prerequisites	Credit/Billing Hours
Program of Study Requirements			
METD 110	Mechanical CAD Drafting I	Minimum 2.0 in (METD 100 or Mechanical Drafting Placement Test 80%) and Reading Level 4 and Writing Level 4 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 6
METD 150	Industrial Blueprint Reading	None	3 / 3
METM 100	Manufacturing Processes	Reading Level 3 and Writing Level 4	3 / 4.5
METM 108	Machine Tool Operations	Reading Level 3 and Writing Level 4 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 6
Credits			14 / 19.5

Semester II	Course Title	Prerequisites	Credit Hours
Program of Study Requirements			
METD 111	Mechanical CAD Drafting II	Minimum 2.0 in METD 110 and Reading Level 4 and Writing Level 4 and Math Level 4	4 / 6
METD 130	Geometric Dimension/ Tolerance	Minimum 2.0 in (METD 100 or Mechanical Drafting Placement Test 80%) and Reading Level 4 and Writing Level 4 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 6
METD 220	Basic Unigraphics/NX	Minimum 2.0 in METD 110 and Reading Level 4 and Writing Level 4 and Math Level 4	4 / 6
METS 115	Intro to Mechanical Systems	Reading Level 4 and Writing Level 4 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 6
Credits			16 / 24
Semester III	Course Title	Prerequisites	Credit Hours
Program of Study Requirements			
METM 190	Metallurgy and Heat Treatment	Reading Level 5 and Writing Level 6 and (Math Level 4 or minimum 2.0 in MATH 105 or MATH 106)	4 / 6
METM 195	Quality/Metrology/ Inspection	Minimum 2.0 in (METD 130 and (METM 108 or METM 110)) and Reading Level 4 and Writing Level 4 and Math Level 4	2 / 3
METM 220	Basic Mastercam	Minimum 2.0 in (METM 108 or METM 110) and Reading Level 4 and Writing Level 4 and Math Level 4	4 / 6
Credits			10 / 15
Total Credits			40 / 58.5