



## Computer Automated Design C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 1800

Effective: Fall 2022 – Summer 2027

### Description

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.

### Milestone

Completion of METD 110 and METD 150 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

### 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
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 100	Manufacturing Processes	3 / 4.5
METM 108	Machine Tool Operations	4 / 6
METM 190	Metallurgy and Heat Treatment	4 / 6
METM 195	Quality/Metrology/ Inspection	2 / 3
METM 220	Basic Mastercam	4 / 6
METS 115	Intro to Mechanical Systems	4 / 6

## Minimum Total Credit Hours

40 credits / 58.5 billing hours

## Recommended Course Sequence

Semester I
METD 110 – Milestone course
METD 150 – Milestone course
METM 100
METM 108

Semester II
METD 111
METD 130
METD 220
METS 115

Semester III
METM 190
METM 195
METM 220

*LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.*