

MANUFACTURING ENGINEERING TECHNOLOGY - MECHANICAL DESIGN/ COMPUTER AIDED MACHINING, ASSOCIATE OF APPLIED SCIENCE

Curriculum Code #6217

Effective August 2026

Division of Engineering, Business and Information Technologies (<http://catalog.lorainccc.edu/academic-programs/engineering-business-information-technologies/>)

The Manufacturing Engineering Technology – Mechanical Design / Computer Aided Machining program prepares students with the knowledge, hands-on technical skills, and cognitive abilities required for entry-level employment in today's manufacturing industry. Students should work closely with their advisors as they choose between two options (Mechanical Design or Computer Aided Machining) to focus their training on skills in mechanical drafting and 3D CAD design or the programming, setup, and operation of Computer Numerical Controlled (CNC) machining and turning centers. Graduates are prepared to pursue careers in a wide range of manufacturing sectors. Lorain County Community College has articulation agreements with colleges and universities, including programs offered through LCCC's University Partnership.

First Year

Fall Semester		Hours
MTHM 155	TECHNICAL MATHEMATICS I ⁶	4
SDEV 101	INTRODUCTION TO THE LCCC COMMUNITY ³	1
TECN 111	TECHNICAL PROBLEM SOLVING	3
TECN 115	INDUSTRIAL BLUEPRINT READING	2
TECN 131	MANUFACTURING PROCESSES I ¹	3

Mechanical Design option:

CADD 111	INTRODUCTION TO COMPUTER AIDED DRAFTING ¹	2
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Computer Aided Machining option:

CAMM 111	INTRODUCTION TO COMPUTER NUMERICAL CONTROL ¹	2
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Hours **15**

Spring Semester

Select one of the following: **3**

CADD 212	INTRODUCTION TO CREO PARAMETRIC (PRO/ENGINEER) ²	
CADD 213	INTRODUCTION TO SOLIDWORKS ^{2,7}	
CADD 214	INTRODUCTION TO INVENTOR ²	
ENGL 161	COLLEGE COMPOSITION I	3
PHYC 150	GENERAL PHYSICS I ²	4
TECN 132	MANUFACTURING PROCESSES II ^{2,8}	3

Mechanical Design option:		
EMCH 111	STATICS FOR TECHNOLOGY ²	3
Computer Aided Machining option:		
CAMM 225	ADVANCED CNC LATHES ²	3
Hours		16

Second Year

Fall Semester

MTHM 156	TECHNICAL MATHEMATICS II ^{2,6}	4
ENGL 164	COLLEGE COMPOSITION II WITH TECHNICAL TOPICS ²	3

Mechanical Design option:

EMCH 211	STRENGTH OF MATERIALS ²	4
PHYC 152	GENERAL PHYSICS II ²	5
or CHMY 171	or GENERAL CHEMISTRY I	

Computer Aided Machining option:

CAMM 215	ADVANCED CNC MILLING MACHINES ²	3
QLTY 111 or QLTY 122 ¹	QUALITY MEASUREMENTS - METROLOGY or BASIC QUALITY TOOLS AND APPLICATIONS	3
TECN 133	MECHANICAL SYSTEMS	3

Hours **16**

Spring Semester

EMCH 112	ENGINEERING MATERIALS ²	3
TECN 245	GEOMETRIC DIMENSIONING AND TOLERANCING ^{2,9}	2
Select any Arts and Humanities OT 36 course ⁴		3
Select any Social and Behavioral Sciences OT 36 course ⁵		3

Mechanical Design option:

EMCH 221	MACHINE DESIGN ²	3
TECN 121	FLUID POWER SYSTEMS	3

Computer Aided Machining option:

CAMM 235	CAD-CAM GRAPHICS ²	3
CAMM 237	COMPUTER AIDED MACHINING CAPSTONE ²	3

Hours **17**

Total Hours **64**

¹ Indicates that this course has a prerequisite or may be taken concurrently.

² Indicates that this course requires a prerequisite.

³ A student must register for the orientation course when enrolling for more than six credit hours per semester or any course that would result in an accumulation of 12 or more credit hours.

⁴ Select any **Arts and Humanities** Ohio Transfer 36 (<http://catalog.lorainccc.edu/academic-information/transfer-module-requirements/>) course.

⁵ Select any **Social and Behavioral Sciences** Ohio Transfer 36 (<http://catalog.lorainccc.edu/academic-information/transfer-module-requirements/>) course.

⁶ Students are required to complete the MTHM 155 and MTHM 156 sequence. Alternatively, students may fulfill the mathematics requirement by completing the MTHM 171 and MTHM 174 sequence or MTHM 176 (or a higher-level mathematics course). Students should work closely with their academic advisors.

⁷ Indicates that this course is required for the Mechanical Engineering Technology Ohio Guaranteed Transfer Pathway.

⁸ Students transferring to Cleveland State University for a Bachelor of Science in Mechanical Engineering Technology are required to take ELCT 111 instead of TECN 132.

⁹ Students transferring to Cleveland State University for a Bachelor of Science in Mechanical Engineering Technology are required to take MET 202 at CSU (via UP Express) instead of TECN 245.

Program Contact(s):

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For information about admissions, enrollment, transfer, graduation and other general questions, please contact your advising team (<https://www.lorainccc.edu/admissions-and-enrollment/advising-and-counseling/>).

**More program information can be found on our website.
(<https://www.lorainccc.edu/engineering/manufacturing-engineering/>)**

Credit for Prior Learning (PLA) options may be available for your program. For more information, please visit our website: www.lorainccc.edu/PLA (<http://www.lorainccc.edu/PLA>)

Program Learning Outcomes

1. Use engineering technology applications appropriate to the discipline.
2. Problem solve and make recommendations for improvement, both orally and through written technical reports.
3. Explore and evaluate multiple options to achieve engineering technology design goals.