

Associate of Applied Science Degree Engineering Technologies

Mechanical Engineering Technology

Computer Aided Design Concentration (9444)

This concentration emphasizes using CAD (computer aided design) for layout, design and creating drawings in mechanical and industrial applications. This degree is approved by the AWT (Alliance for Working Together www.lakelandcc.edu/academic/engineer/AWT) to meet employment needs throughout the Alliance in Northeast Ohio.

NOTE: CIMN 1110 has prerequisites that include prior exposure to applied technologies or successful completion of the CIM Tech Prep program. Students can take all or part of the sequence of CIMN 0950 Introduction to Machine-Tool Technology and CIMN 0960 Introduction to Machine-Tool Set-Up and CAM to gain the required knowledge and experience, if necessary. CIMN 0960 can be taken concurrently with CIMN 1110. Students with prior manufacturing experience should contact the Engineering Technologies Office to schedule proficiency exams for CIMN 0950 and CIMN 0960.

First Semester:

CADT 1100	Introduction to AutoCAD	3
CIMN 1110	Machining Processes	3
ENGL 1110*	English Composition I (A)	3
OR		
ENGL 1111	English Composition I (B)	2
ENGR 1000	Introduction to Engineering Technology	2
MATH 1001	Introduction to Technical Mathematics	4
SPCH 1050**	Fundamentals of Public Speaking	2
OR		
SPCH 1150	Fundamentals of Interpersonal Communication	17

Second Semester:

CADT 1500	Advanced AutoCAD	3
CADT 2100	Introduction to SolidWorks	3
CIMN 1210	Materials Processing	3
MATH 1101	Technical Mathematics I	4
MECT 1150	Technical Communications	3
MECT 1600	Geometric Dimensioning and Tolerancing	2

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Third Semester:

CADT 2500	Advanced SolidWorks	3
CIMN 2190	Manufacturing Methods and Costs	3
CIMN 2240	Jig and Fixture Design I	3
MECT 2250	Mechanism Design	3
PHYS 1100	Applied Physics I	3
Choose course(s) from the Technical Electives list		2

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Fourth Semester:

CADT 2600	SolidWorks Design Productivity	3
CIMN 2875	Design and Manufacturing Capstone	3
PHYS 1200	Applied Physics II	3
PHYS 2100	Applied Physics III	2
QENT 1200	Quality Concepts and Techniques	2
Choose course(s) from the Arts and Humanities Electives list		3
Choose course(s) from the Social and Behavioral Sciences Electives list		3

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Program Total: 71

**English course selection is based on placement test results (ENGL 1111 is 4 credits; only 3 credits apply to the degree).*

***Students may substitute either SPCH 1000 or SPCH 1100. One of these 3 credit courses may be required for students transferring to a four-year college.*

Technical Electives: minimum 2 credits

BUSM 1800	Essentials of Management and Supervision	3
CIMN 1420	Computer Numerical Control Part Programming (CNC)	2
CIMN 1430	Introduction to Computer Assisted Part Programming	2
CIMN 1450	Programming CNC Lathes	2
CIMN 1460	Programming CNC Machining Centers	2
CIMN 2450	Oxyfuel Gas Welding	2
CIMN 2550	Stick Welding	2
CIMN 2610	Automation and Robotics	3
CIMN 2660	MIG, TIG and Flux-Cored Arc Welding	3
CPET 1120	C Programming for Engineering Technology	3
CPET 1200	Visual Basic for Engineering Technology I	2
ENGR 2800	Engineering Co-Op Experience	1-3
MECT 2110	Engineering Mechanics I	3
MECT 2500	Electromechanics	2

Arts and Humanities Electives: minimum 3 credits

ARTS 1120, 2220, 2230; ENGL 2250, 2260, 2280, 2290; HUMX 1100, 1200; MUSC 1200, 1215, 1800, 2200, 2250; PHIL 1500, 2000

Social and Behavioral Sciences Electives: minimum 3 credits

ANTH 1160; ECON 1150, 2500, 2600; GEOG 1500, 1600, 2500; HIST 1100, 1200, 2100, 2200, 2400; POLS 1300, 2500; PSYC 1500; SOCY 1150