

INDUSTRIAL MAINTENANCE TECHNOLOGY - AAS

Offered at: Ashland Community and Technical College, Big Sandy Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Gateway Community and Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community and Technical College, Maysville Community and Technical College, Owensboro Community and Technical College, Somerset Community College, Southcentral Kentucky Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 4703037019

Course	Title	Credits
General Education Core		
ENG 101	Writing I	3
MAT 116	Technical Mathematics (or higher)	3
Natural Sciences		3
Heritage/Humanities		3
Social/Behavioral Sciences		3
Oral Communications		3
General Education Core Subtotal		18

Students must complete one of the tracks listed below to complete the AAS requirements.

Advanced Manufacturing Technician Track

Offered at: Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Gateway Community and Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community and Technical College, Maysville Community and Technical College, Owensboro Community and Technical College, Somerset Community College, Southcentral Kentucky Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 470303702

Progression in the Advanced Manufacturing Technician Track is contingent upon achievement of a grade "C" or better in all courses and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale). The diploma and certificates within the Advanced Manufacturing Track require a "C" or better in all courses and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Course	Title	Credits
Required		
General Education Core Subtotal		18
Technical Core		
Digital Literacy Course or demonstrated competency ¹		0-3
BRX 120	Basic Blueprint Reading	3
CMM 110	Fundamentals of Machine Tools - A	3
EET 270 & EET 271	Electrical Motor Controls I and Electrical Motor Controls I Lab	4

EET 272 & EET 273	Electrical Motor Controls II and Electrical Motor Controls II Lab	4
EET 276 & EET 277	Programmable Logic Controllers and Programmable Logic Controllers Lab	4
FPX 100 & FPX 101 or ELT 265	Fluid Power and Fluid Power Lab Applied Fluid Power	3-5
IMT 1381 or IET 111	Safety Culture Lean Safety Culture	1
IMT 1382 or IET 113	5S Lean 5S Methodology	1
IMT 1383 or IET 112	Total Production Management Lean Manufacturing Concepts -TPS	1
IMT 1384 or IET 114	Problem Solving Lean Problem Solving Methodology	1
IMT 1385 or IET 115	Maintenance Reliability Lean Machine Reliability	1
IMT 100 & IMT 101	Welding for Maintenance and Welding for Maintenance Lab	5
Select one of the following two options:		5
IMT 110 & IMT 111	Industrial Maintenance Electrical Principles and Industrial Maintenance Electrical Principles Lab	
EET 119	Basic Electricity	
IMT 150 & IMT 151	Maintaining Industrial Equipment I and Maintaining Industrial Equipment I Lab	5
IMT 200	Industrial Robotics and Robotic Maintenance	4
IMT 289	Industrial Maintenance Technology Capstone	1
Total Credits		64-69

¹ Digital Literacy course - 3 credit hours or Demonstrated Competency - 0 credit hours

Note: Minimum of 1,824 hours of Industry Sponsored Internship.

Automotive Manufacturing Technical Education Collaborative (AMTEC) Track

Offered at: Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Hopkinsville Community College, Jefferson Community and Technical College, Owensboro Community and Technical College, Somerset Community College

Program Plan Number: 470303703

Progression in the Automotive Manufacturing Technical Education Collaborative (AMTEC) Track is contingent upon achievement of a grade of "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale). The diploma and certificates within the Automotive Manufacturing Technical Education Collaborative (AMTEC) track require a "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Course	Title	Credits
Required		
General Education Core Subtotal		18

Technical Core

Digital Literacy Course or demonstrated competency ¹	0-3
Select one of the following three options:	2-3
BRX 120 Basic Blueprint Reading	
BRX 110 Basic Blueprint Reading for Machinist	
ELT 102 Blueprint Reading	
Select one of the following two options:	3-5
FPX 100 Fluid Power & FPX 101 and Fluid Power Lab	
ELT 265 Applied Fluid Power	
Select one of the following three options:	5
IMT 110 Industrial Maintenance Electrical Principles & IMT 111 and Industrial Maintenance Electrical Principles Lab	
ELT 110 Circuits I	
EET 119 Basic Electricity	
IMT 150 Maintaining Industrial Equipment I & IMT 151 and Maintaining Industrial Equipment I Lab	5
Select one of the following five options:	4-5
IMT 220 Industrial Maintenance Electrical Motor Controls I & IMT 221 and Industrial Maintenance Electrical Motor Controls I Lab	
EET 270 Electrical Motor Controls I & EET 271 and Electrical Motor Controls I Lab	
ELT 244 Electrical Machinery and Controls	
IMT 120 Industrial Maintenance Rotating Machinery & IMT 121 and Industrial Maintenance Rotating Machinery Lab	
EET 264 Rotating Machinery & EET 265 and Rotating Machinery Lab	
Select one of the following four options:	5
IMT 100 Welding for Maintenance & IMT 101 and Welding for Maintenance Lab	
WLD 120 Shielded Metal Arc Welding & WLD 121 and Shielded Metal Arc Welding Fillet Lab	
WLD 140 Gas Metal Arc Welding & WLD 141 and Gas Metal Arc Welding Fillet Lab	
WLD 152 Basic Welding B	
IMT 289 Industrial Maintenance Technology Capstone	1
IET 120 Machine Tool Operations	4
IET 203 Programmable Logic Controllers	5
IET 205 Robot Maintenance	4
IMT 1381 Safety Culture or IET 111 Lean Safety Culture	1
IMT 1382 5S or IET 113 Lean 5S Methodology	1
IMT 1383 Total Production Management or IET 112 Lean Manufacturing Concepts -TPS	1
IMT 1384 Problem Solving or IET 114 Lean Problem Solving Methodology	1
IMT 1385 Maintenance Reliability or IET 115 Lean Machine Reliability	1
Total Credits	61-68

¹ Digital Literacy course - 3 credit hours or Demonstrated Competency - 0 credit hours

Advanced Manufacturing Tool and Die Technician Track

Offered at: Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Jefferson Community and Technical College

Program Plan Number: 470303704

Progression in the Advanced Manufacturing Tool and Die Technician Track is contingent upon achievement of a grade of "C" or better in all courses and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale). The diploma and certificates within the Advanced Manufacturing Track require a "C" or better in all courses and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Course	Title	Credits
Required		
General Education Core Subtotal		18
Technical Core		
Digital Literacy Course or demonstrated competency ¹		0-3
BRX 120	Basic Blueprint Reading	3
Select one of the following two options:		5
IMT 110 & IMT 111	Industrial Maintenance Electrical Principles and Industrial Maintenance Electrical Principles Lab	
EET 119	Basic Electricity	
EET 270 & EET 271	Electrical Motor Controls I and Electrical Motor Controls I Lab	4
FPX 100 & FPX 101	Fluid Power and Fluid Power Lab	5
IMT 150 & IMT 151	Maintaining Industrial Equipment I and Maintaining Industrial Equipment I Lab	5
IMT 289	Industrial Maintenance Technology Capstone	1
IMT 100 & IMT 101	Welding for Maintenance and Welding for Maintenance Lab	5
CMM 110	Fundamentals of Machine Tools - A	3
CMM 112	Fundamentals of Machine Tools - B	3
Select one of the following two options:		6-7
IMT 260	Presswork and Die Maintenance	
CMM 153 & CMM 154	Mold Theory and Die Theory	
IMT 1381 or IET 111	Safety Culture Lean Safety Culture	1
IMT 1382 or IET 113	5S Lean 5S Methodology	1
IMT 1383 or IET 112	Total Production Management Lean Manufacturing Concepts -TPS	1
IMT 1384 or IET 114	Problem Solving Lean Problem Solving Methodology	1
IMT 1385	Maintenance Reliability	1

or IET 115 Lean Machine Reliability

Total Credits **63-67**

¹ Digital Literacy course - 3 credit hours or Demonstrated Competency - 0 credit hours

Industrial Maintenance Track

Offered at: Ashland Community and Technical College, Big Sandy Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Gateway Community and Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community and Technical College, Maysville Community and Technical College, Owensboro Community and Technical College, Somerset Community College, Southcentral Kentucky Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 470303701

Progression in the Industrial Maintenance Track is contingent upon achievement of a grade of "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale). The diploma and certificates within the Industrial Maintenance Track require a "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Course	Title	Credits
Required		
General Education Core Subtotal		18
Technical Core		
Digital Literacy Course or demonstrated competency ¹		0-3
Select one of the following four options:		2-3
BRX 110	Basic Blueprint Reading for Machinist	
BRX 120	Basic Blueprint Reading	
ELT 102	Blueprint Reading	
CAD 100	Introduction to Computer Aided Design	
Select one of the following two options:		3-5
FPX 100 & FPX 101	Fluid Power and Fluid Power Lab	
ELT 265	Applied Fluid Power	
Select one of the following three options:		5
IMT 110 & IMT 111	Industrial Maintenance Electrical Principles and Industrial Maintenance Electrical Principles Lab	
ELT 110	Circuits I	
EET 119	Basic Electricity	
IMT 150 & IMT 151	Maintaining Industrial Equipment I and Maintaining Industrial Equipment I Lab	5
Select one of the following:		4-5
IMT 220 & IMT 221	Industrial Maintenance Electrical Motor Controls I and Industrial Maintenance Electrical Motor Controls I Lab	
EET 270 & EET 271	Electrical Motor Controls I and Electrical Motor Controls I Lab	
ELT 244	Electrical Machinery and Controls	

IMT 120 & IMT 121	Industrial Maintenance Rotating Machinery and Industrial Maintenance Rotating Machinery Lab	
EET 264 & EET 265	Rotating Machinery and Rotating Machinery Lab	
Select one of the following four options:		4-5
IMT 280 & IMT 281	Advanced Programmable Logic Controllers and Advanced Programmable Logic Controllers Lab	
EET 276 & EET 277	Programmable Logic Controllers and Programmable Logic Controllers Lab	
IET 203	Programmable Logic Controllers	
ELT 250	Programmable Logic Controllers	
Select one of the following four options:		5
IMT 100 & IMT 101	Welding for Maintenance and Welding for Maintenance Lab	
WLD 120 & WLD 121	Shielded Metal Arc Welding and Shielded Metal Arc Welding Fillet Lab	
WLD 140 & WLD 141	Gas Metal Arc Welding and Gas Metal Arc Welding Fillet Lab	
WLD 152	Basic Welding B	
IMT 289	Industrial Maintenance Technology Capstone	1

Technical Electives
 Select thirteen credit hours of Approved Technical Electives. Other technical elective courses may be taken with approval of the program coordinator. ² **13**

Total Credits **60-68**

¹ Digital Literacy course - 3 credit hours or Demonstrated Competency - 0 credit hours

² Industrial Maintenance Technology approved technical electives list (<https://catalog.kctcs.edu/programs-of-study/aas/industrial-maintenance-technology/#technicalelectivestext>)