



# TENNESSEE COLLEGE OF APPLIED TECHNOLOGY

**PULASKI**

1233 East College Street, Pulaski, TN 38478  
931-424-4014 [www.tcatpulaski.edu](http://www.tcatpulaski.edu)

## ADVANCED MANUFACTURING EDUCATION

The mission of the Advanced Manufacturing Education Program is to increase the number of available skilled workers for existing and emerging manufacturing jobs, enhance worker skills, and knowledge in manufacturing technologies and processes, help improve the productivity of the regions manufacturing industry, increase manufacturer's global competitive advantage, and provide manufacturing related technical assistance to local business and industry. This program offers three career paths: Robotics Automation, Programmable Logic Controls (PLC) Automation, and Plastics Injection Molding. Training in these areas are related to the high tech manufacturing industry of today's economy. Completion of the program yields an Engineering Technician Diploma.

### Employment Opportunities:

- Manufacturing Industries
- Injection Molding Industries
- Robotic Industries

### Program Instructor:

**Dalton Pelfrey**  
[dalton.pelfrey@tcatpulaski.edu](mailto:dalton.pelfrey@tcatpulaski.edu)  
931-424-2416

### ENROLLMENT INFORMATION

Classes Offered:	Full-Time: Monday - Friday 8 to 2:30 Part-Time: Mon - Fri 8 to 11 or 11:30 to 2:30
Program Length:	1,728 Hours (4 trimesters)
Program Location:	Pulaski Main Campus 1233 East College Street, Pulaski, TN 38478
Program Cost including Tuition, Fees, plus Books/Supplies	\$1,312 per trimester x 4 trimesters = \$5,248 \$2,084 Books/Supplies; Total Cost \$7332.00* *These costs are subject to change.
Requirements:	Complete the Admissions Process Checklist
Financial Aid:	Available to those who qualify
For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit our website at <a href="http://www.tcatpulaski.edu">www.tcatpulaski.edu</a>	

### Career Training

Administrative Office  
Technology  
Advanced Manufacturing  
Education  
Building Construction  
Technology  
CNC Machining Technology  
Computer Operating Systems  
and Network Technology  
Electrical and Plumbing  
Construction Technology  
HVAC/R  
Industrial Electricity  
Industrial Maintenance  
Technology  
Patient Care Technology/  
Medical Assisting  
Pharmacy Technology  
Practical Nursing  
Residential/Commercial Wiring  
and Plumbing  
Welding Technology

### Campus Locations

Lawrenceburg Instructional  
Service Center  
North Lawrence Instructional  
Service Center  
Northfield Instructional Service  
Center  
South Lawrence Instructional  
Service Center

# AME Course Outline

<b>First Trimester</b>	
Worker Characteristics	6 Hours
Orientation/Safety/Alcohol Edu & Haven	6 Hours
Technology Foundations	24 Hours
Safety (CPT Module)	45 Hours
Quality Practices and Measurements (CPT Module)	45 Hours
Maintenance Awareness (CPT Module)	45 Hours
Manufacturing Process & Production (CPT Module)	45 Hours
Root Cause Analysis	45 Hours
Principles of Lean Manufacturing/Six Sigma	45 Hours
CAD for 3D Printing	72 Hours
C.M.M. Coordinate Measuring Machine	54 Hours
<b>Quality Assurance Technician Certificate</b>	<b>432 Hours</b>

<b>Second Trimester</b>	
Worker Characteristics	6 Hours
Basic Mechanical Theory and Lab	42 Hours
Basic Hydraulics Theory and Lab	72 Hours
Basic Pneumatics Theory and Lab	46 Hours
Introduction to Electrical Motor Controls	18 Hours
Advanced Hydraulics and Zero Pressure Testing	80 Hours
3D Printing & Scanning	94 Hours
Introduction to Manual Machining Mill and Lathe	74 Hours
<b>Manufacturing Technician Certificate</b>	<b>864 Hours</b>

<b>ELECTIVES Third Trimester Plastics</b>	
Worker Characteristics	6 Hours
Injection Molding Theory and Lab I, Routsis Training	123 Hours
Injection Molding Theory and Lab II, Routsis Training	123 Hours
Advanced Molding Theory and Lab, Routsis Training	120 Hours
Internship	60 Hours
<b>Plastics Engineering Technician Certificate</b>	<b>1296 Hours</b>

<b>ELECTIVES Fourth Trimester Plastics</b>	
Worker Characteristics	6 Hours
Tool and Die	102 Hours
PLC Theory and Lab I	108 Hours
PLC Theory and Lab II	108 Hours
Robotic Theory/Lab 1	108 Hours
<b>Master Plastics Engineering Technician Diploma</b>	<b>1728 Hours</b>

For More Information Please Contact  
 Student Services Department  
 P.O. Box 614, Pulaski, TN 38478  
 931-424-4014

Accredited Member Commission of the Council on Occupational Education  
 7840 Roswell Road, Building 300 Suite 325  
 Atlanta, GA 30350  
 Phone: (770) 396-3898 \* (800) 917-2081

*please see curriculum continued on page 3*

# AME Course Outline

<b>ELECTIVES Third Trimester PLC</b>	
Worker Characteristics	6 Hours
PLC Theory and Lab I	108 Hours
PLC Theory and Lab II	108 Hours
Advanced PLC Theory and Lab	150 Hours
Internship/Final Project	60 Hours
<b>PLC Automation Engineering Technician Certificate</b>	<b>1296 Hours</b>

<b>ELECTIVES Fourth Trimester PLC</b>	
Worker Characteristics	6 Hours
Robotic Theory and Lab I	108 Hours
Robotic Theory and Lab II	150 Hours
Robotic Maintenance	108 Hours
Robotic Project	60 Hours
<b>Master PLC Automation Engineering Technician Diploma</b>	<b>1728 Hours</b>

<b>ELECTIVES Third Trimester Robotics</b>	
Worker Characteristics	6 Hours
Robotic Theory and Lab I	108 Hours
Robotic Theory and Lab II	150 Hours
PLC Theory and Lab I	108 Hours
Internship/Final Project	60 Hours
<b>Robotic Automation Engineering Certificate</b>	<b>1296 Hours</b>

<b>ELECTIVES Fourth Trimester Robotic Automation Engineering</b>	
Worker Characteristics	6 Hours
Advanced Robotic Theory & Lab	140 Hours
Robotic Maintenance	108 Hours
Advanced Robotic Programming and Troubleshooting	178 Hours
<b>Master Robotic Automation Engineering Technician Diploma</b>	<b>1728 Hours</b>

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