



# TENNESSEE COLLEGE OF APPLIED TECH PULASKI

1233 East College Street, Pulaski, TN 38478  
931-424-4014 tcatpulaski.edu

## AUTOMATION, PROCESS & PRODUCTION SYSTEMS

Automation, Process & Production Systems' mission 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, CAD Design, 3D printing, 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  
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	\$1,440 per trimester x 4 trimesters = \$5,760 \$1,376.58 Books/Supplies; Total Cost \$7,136.58* *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  
Automation, Process & Production Systems  
Basic Dental Assisting  
Building Construction Technology  
CNC Machining Technology  
Computer Operating Systems, Networking & Cybersecurity  
Criminal Justice:  
Correctional Officer  
Electrical and Plumbing Construction Technology  
Heating, Ventilation, Air Conditioning and Refrigeration  
Industrial Electricity  
Industrial Maintenance Technology  
Patient Care Technology/  
Medical Assisting  
Pharmacy Technology  
Practical Nursing  
Residential/Commercial Wiring & Plumbing  
Welding Technology

### Training Locations

Main Campus (Pulaski, TN)  
Lawrence County Instructional Service Center  
Lawrenceburg Instructional Service Center  
North Lawrence Instructional Service Center  
South Lawrence Instructional Service Center

Tennessee College of Applied Technology-Pulaski does not discriminate on the basis of race, color, religion, creed, ethnicity or national origin, sex, disability, age status as a protected veteran or any other class protected by Federal or State laws and regulations and by Tennessee Board of Regents policies with respect to employment, programs, and activities. The following person has been designated to handle inquiries regarding non-discrimination policies: Christa Williams, VP Student Services; christa.williams@tcatpulaski.edu; 931-424-2404. The TCAT-Pulaski policy on non-discrimination can be found at [tcatpulaski.edu](http://tcatpulaski.edu).

# 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)	54 Hours
Quality Practices and Measurements (CPT Module)	54 Hours
Principles of Lean Manufacturing/Six Sigma	63 Hours
CAD for 3D Printing	81 Hours
C.M.M. Coordinate Measuring Machine	54 Hours
3D Printing	90 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	48 Hours
Introduction to Electrical Motor Controls	18 Hours
Advanced Hydraulics and Zero Pressure Testing	78 Hours
Introduction to Manual Machining Mill and Lathe	78 Hours
Maintenance Awareness	45 Hours
Mfg Process & Production	45 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	144 Hours
Injection Molding Theory and Lab II, Routsis Training	144 Hours
Advanced Molding Theory and Lab, Routsis Training	138 Hours
<b>Plastics Engineering Technician Certificate</b>	<b>1296 Hours</b>

<b>ELECTIVES Fourth Trimester Plastics</b>	
Worker Characteristics	6 Hours
Tool and Die	150 Hours
PLC Theory and Lab I	108 Hours
Robotic Theory/Lab 1	108 Hours
Plastics Robotics Project	60 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
PLC 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
PLC Robotics 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
Robotic 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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