



# 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<br>Part-Time: Mon - Fri 8 to 11 or 11:30 to 2:30  |
| Program Length:   | 1296 Hours (3 trimesters)  |
| Program Location:   | Pulaski Main Campus<br>1233 East College Street, Pulaski, TN 38478   |
| Program Cost including Tuition, Fees, plus Books/Supplies   | \$1,440 per trimester x 3 trimesters = \$4,320<br>\$587.00 Books/Supplies; Total Cost \$4,907.00*<br>*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).

# APPS Course Outline

| First Trimester                            | Hours            |
|--|------------------|
| Worker Characteristic                      | 6                |
| Technology Foundations                     | 24               |
| Principles of Lean Manufacturing/Six Sigma | 72               |
| OSHA and Safety Fundamentals               | 30               |
| Essentials Fundamentals of Industry        | 42               |
| Quality Fundamentals and Measurements      | 72               |
| Introduction to CAD                        | 30               |
| Introduction to 3D Printing                | 30               |
| Metrology Equipment Fundamentals           | 72               |
| Industrial Components                      | 54               |
| <b>Production Technician Certificate</b>   | <b>432 Hours</b> |

| Second Trimester                                 | Hours            |
|--|------------------|
| Worker Characteristic                            | 6                |
| Basic Mechanical Theory and Lab                  | 42               |
| Basic Hydraulics Theory and Lab                  | 72               |
| Basic Pneumatics Theory and Lab                  | 48               |
| Industry 4.0 Fundamentals                        | 30               |
| Applied Principles of Industry 4.0               | 78               |
| Advanced Hydraulics and Pneumatics               | 78               |
| Manual Machining Fundamentals                    | 78               |
| <b>Mechanical Systems Technician Certificate</b> | <b>864 Hours</b> |

## ELECTIVES—THIRD TRIMESTER

| Third Trimester ELECTIVES                   | Hours             |
|---|-------------------|
| Worker Characteristic                       | 6                 |
| Injection Molding Theory and Lab            | 240               |
| Advanced Molding Theory and Lab             | 108               |
| Tool and Die                                | 78                |
| <b>Injection Molding Technician Diploma</b> | <b>1296 Hours</b> |

| Third Trimester ELECTIVES                        | Hours             |
|--|-------------------|
| Worker Characteristic                            | 6                 |
| Fundamentals of Materials                        | 30                |
| Technical Drawing Fundamentals                   | 60                |
| Data Processing for Manufacturing                | 30                |
| CAD for 3D Printing                              | 120               |
| 3D Scanning                                      | 30                |
| Industrial 3D Printing                           | 120               |
| Design Project                                   | 36                |
| <b>Additive Manufacturing Technician Diploma</b> | <b>1296 hours</b> |

| Third Trimester ELECTIVES                      | Hours             |
|--|-------------------|
| Worker Characteristic                          | 6                 |
| Industrial Robotic Theory and Lab              | 210               |
| Advanced Robotic Programming & Troubleshooting | 156               |
| Industrial Robotic Maintenance                 | 60                |
| <b>Robotic Automation Technician Diploma</b>   | <b>1296 Hours</b> |

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

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