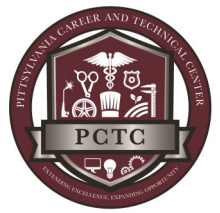


# DCC

Danville Community College



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Pittsylvania Career and Technical Center

**Automation & Robotics**

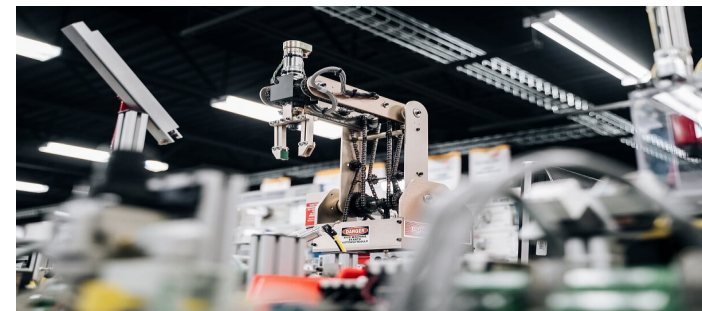
**1 Year Program**

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**For More Information**

**Contact:**

Jessica S. Dalton, Principal  
Pittsylvania Career and Technical Center  
11700 US Hwy 29  
Chatham, VA 24531  
(434) 432-9416



# Automation & Robotics 1 Year Program

9 <sup>th</sup> Grade
English 9
World History I or II
Earth Science
Algebra I or Geometry
PE9
Materials & Processes Technology (8433)
Digital Applications 6611
Elective

## Dual Enrollment Credit

### Courses at Base School

- ◆ Technical Drawing & Design (3)
- ◆ Engineering, Drawing, & Design (4)
- ◆ Computer Information Systems (3)

### Courses at PCTC

- ◆ SAF 130– Industrial Safety OSHA 10 (1)
- ◆ ELE 115– Basic Electricity (3)
- ◆ ELE 147– Electrical Power and Control Systems (3)
- ◆ ELE 150– Machine Control Using Relay & Programmable Logic (3)
- ◆ ELE 140– Introduction to Mechatronics (3)
- ◆ ELE 160– Introduction to Robotics (3)
- ◆ ELE 177– Industrial Robotics and Robotics Programming (3)

\*\*Please note, in addition to Technical and Program requirements, students must complete the requirements for graduation at the base school.

10 <sup>th</sup> Grade
English 10
Biology
Geometry, Algebra II, or Algebra Functions & Data Analysis
PE10
Engineering Drawing & Design (8436)
Technical Drawing & Design (8435)
Introduction to Business 6035
Elective

## Industry Certifications

- ◆ OSHA 10

11 <sup>th</sup> Grade
English 11
US History
Economics & Personal Finance
Algebra Functions & Data Analysis, Adv. Algebra/Trigonometry, or Pre-Calculus

12 <sup>th</sup> Grade
English 12
US Government
Elective
Environmental Science, Astronomy, or Chemistry

11 <sup>th</sup> or 12 <sup>th</sup> Grade
Semester 1: Electronics/ Industrial Robotics Technology (8547)
Semester 2: Industrial Robotics Technology (8558)
** Student would take 4 electives at their base school during the year they are not attending PCTC or enroll into a different 1 year program at PCTC.

## Course Description

This course provides instruction in programming robots used in assembly and manufacturing settings. Students will work with various power systems while acquiring machining, welding, and system engineering skills. This course leads to industry certification options, including the general industry OSHA 10 card, to further validate their mastery of related skills. This course provides a depth of the basic skills required in today's automated manufacturing environment. Students will explore careers, build circuits, and use principles of physics to analyze basic electronic and robotic components.