



DABNEY S. LANCASTER  
COMMUNITY COLLEGE

# Instrumentation Technology Fundamentals

Career Studies Certificate  
Program Code: 221-938-21  
2020-2021 Catalog

Jay Hooper  
[jhooper@dslcc.edu](mailto:jhooper@dslcc.edu)  
(540) 863-2892  
[www.dslcc.edu](http://www.dslcc.edu)

## **Purpose**

Automation and other advanced manufacturing systems are the backbone of modern industry operations. These complex systems involve the interaction of electrical, electronic, mechanical and computer components and devices. Technicians must be broadly trained in the areas of electrical and electronics fundamentals, electrical machinery and controls, PLCs, hydraulics and pneumatics, computer networking, mechatronic system fundamentals, system analysis and troubleshooting techniques, and other technical applications.

## **Admission Requirements**

Students who meet the admission requirements to the College are eligible for enrollment into the program. Individuals are expected to be proficient in basic English, mathematics and reading. Appropriate developmental courses are available for those who need to update their skills.

## **Program Description**

The Instrumentation Technology Fundamentals program is designed to prepare individuals for entry level technical support positions or advancement opportunities in the instrumentation field. Instrumentation technicians install, calibrate, adjust and maintain devices and control systems. Work involves the measurement and regulation of the temperature, pressure, level and flow of the various processes used in an automated manufacturing or production environment. Safety and efficiency of the manufacturing operations are key. Entry level job titles include instrumentation technician trainee and manufacturing technician.

## **Employment Outlook**

Those who complete this program will find opportunities as: E&I Technician, Instrumentation Technician, Electrical Technician, or Industrial Technician.

1000 Dabney Drive  
Clifton Forge, Virginia 24422  
540.863.2820  
[SSFrontDesk@dslcc.edu](mailto:SSFrontDesk@dslcc.edu)

35 Vista Links Drive  
Buena Vista, Virginia 24416  
540.261.1211  
[RRCFrontDesk@dslcc.edu](mailto:RRCFrontDesk@dslcc.edu)

Course Number	Course Name	Cr.	Pre/Co Requisites	Semester	Grade
<b>Fall Semester</b>					
ELE 150	AC and DC Circuit Fundamentals	3			
INS 220	Introduction to Fluid Powers	3			
INS 110	Principles of Instrumentation	3			
MTH 131	Technical Mathematics	3	Prerequisite: MTE 1 – 6		
<b>Spring Semester</b>					
ELE 175	Industrial Solid State Devices and Circuits	2	Prerequisite: ELE 150		
ELE 239	Programmable Controllers	3			
INS 112	Instrumentation Fundamentals	3			
ITE 115	Introduction to Computer Applications and Concepts	3			
ELE 156	Electrical Control Systems	3			

**Credit hours required for career studies certificate: 26**

#### **TRANSFER OPTIONS**

Agreements exist between Dabney S. Lancaster Community College and various four-year colleges and universities. Contact Student Services for information about further study after graduation from DSLCC.

#### **DISCLAIMERS**

Every effort is made to ensure accuracy, but the College reserves the right to make edits with respect to course offerings, programs and requirements contained in this publication. This information is provided for the convenience of the reader and DSLCC disclaims any liability.

Please note that not all courses are offered at all locations or during all sessions. Check class sites and times when registering. Most programs of study begin in the fall semester. Please note that while new students are welcome to enroll in any session, those who enter in spring or summer will likely find that completion of requirements may take longer.