

THIS CERTIFICATE IS PRESENTED TO

# BARRETT WISE

Who has been formally evaluated for demonstrating the highest levels of knowledge and skills and, as such, is bestowed the following NC3 Global Credential.

## Fundamentals of PLCs - Siemens

COLLABORATE IN THE CLASSROOM. COMPETE IN THE MARKETPLACE.



Carlos Miranda, CEO of Festo North America



Roger Tadajewski, NC3 Executive Director



THIS CERTIFICATE IS RECOGNIZED BY:

**FESTO**



05/02/2023

Date Completed

Virginia Peninsula Community College

NC3 Certification Center

## Certification Competencies

**BARRETT WISE**

has displayed competency of the content listed below through both cognitive and skill based assessments.

- Understanding of the fundamentals of PLC Automation Systems to include, PLC operation, terminology, and processing of inputs and outputs.
- Understanding of addressing to include base tag, alias tag, data types, and number systems.
- Understanding of programming languages and the IEC 61131-3 standard to include ladder logic, sequential function chart, function block diagram, structured text, and instruction list.
- Understanding of the location of the PLC program, downloading, uploading, and nonvolatile memory.
- Understanding of troubleshooting using the PLC software and downloading a project to the PLC.
- Performing the initial set up and network configuration of the PLC.
- Demonstrating how to verify communication of the PLC using the Window Command Prompt and TIA Portal.
- Demonstrating familiarization of the Start page, Help Menu, how to open an existing project, and examining the structure of the PLC program, and downloading the project to the PLC using TIA Portal software.
- Demonstrating familiarization with how to create PLC routines in ladder diagram (LAD), function blocks diagram (FBD), and structured control language (SCL), and how to develop operator interfaces through the TIA Portal software.



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