SIEMENS

SCE Automation Fundamentals Certification Test: PLC

Audience

The SCE (Siemens Cooperates with Education) Program is an overall program designed to educate and equip schools with hardware and software of automation technology. This program provides schools with a recommended training program and materials to ensure that their technical instructors have the necessary level of knowledge to effectively demonstrate the fundamental competencies of an automation technician.

Prerequisites

- Review preparation materials, which include the certification companion and workshop exercises.

- Close any knowledge gaps, either through recommended training or via self-study.

- Pass the (free) 5 minute assessment test offered as a measure of readiness.

Profile

The goal of the SCE Automation Fundamentals Certification is to provide a structured, repeatable method for both training and verifying the ability of an instructor or student to properly implement a Totally Integrated Automation solution while utilizing good engineering and recommended SIMATIC best practices. Certification candidates are first given the materials to build both their automation knowledge and their knowledge of SIMATIC solutions. The candidate is eligible to participate in the certification testing after meeting the training and knowledge requirements. Experiential training and past training will also satisfy the pre-requisites of the certification exam. Passing the (electronic) written sections of the certification exam, offered in 3 distinct parts: PLC, HMI/Networking, and Drives is required to obtain certification. The applicant may take tests independently and achieve certification through each part separately (i.e. "Siemens Certified in Automation Fundamentals: PLCs").

Certification Remediation

A candidate who does not pass the examination should refer to provided class schedules and self-study documentation prior to attempting the test again. A score of 75% must be achieved to pass the certification exam, which can be taken 3 times in 1 year before the exam expires. Training Offerings A candidate can take advantage of many different training offerings available from Siemens, ranging from self-study publications to instructor-led and online classes. The actual training a candidate will require will be based on prior training, prior experience, and the results of the assessment test. The SCE web site will include a Certification section (usa.siemens.com/sce) that provides course and self-study recommendations to benefit the candidate in exam preparation.

Objectives

Upon completion of this course, the student shall be able to:

- Support creation of a PLC application program using Ladder Logic (LAD) following the SIMATIC recommended best practices.

- Troubleshoot errors associated with the automation system.

- Troubleshoot functional errors in the application program or equipment under control.

- Manage project-related tasks

- Recognize key S7-1200 and TIA Portal features and documentation

Topics

1. Ability to support the creation of a PLC application program that meets the operational criteria of the customer using the programming languages of Ladder Logic (LAD) and Function Block Diagram (FBD) following the SIMATIC recommended best practices.
2. Ability to troubleshoot system errors or functional faults within the TIA system or Siemens S7-1200 PLC hardware
3. Ability to manage project-related and maintenance-related tasks, such as hardware catalog updates, hardware and firmware version management, user and system libraries, project documentation, intellectual property protection, archive management, and license management in accordance with recommended SIMATIC best practices