

Siemens Mechatronic Systems Certification Program (SMSCP) Instructor Certification: Level 2 (SMSCP-L2)

Ziele

This course covers the application of Systems Approach to the content topics of the six Level 2 courses: Process Control Technologies; Introduction to Totally Integrated Automation; Automation Systems; Motor Control; Mechanics and Machine Elements; Manufacturing Processes.

This Instructor Certification is based on a Train-the-Trainer model: during this course you will apply the didactic teaching methods from the SAPW course to six courses that you can integrate and teach to students at your educational institution or employees at a training center. Level 2 focuses on the in-depth technical competencies and troubleshooting skills needed for teaching technician-focused programs. Level 2 also includes the development of troubleshooting and industry-oriented problem solving lessons that can be integrated into a classroom setting.

Zielgruppe

Teachers
Engineering or Engineering Technology Faculty or Professors
Project Management Faculty or Professors
Technical Instructors for non-educational institutions
Engineers
Maintenance and Training Managers

Inhalte

System Approach paradigm and course-specific didactic training in Process Control Technologies; Introduction to Totally Integrated Automation; Automation Systems; Motor Control; Mechanics and Machine Elements; Manufacturing Processes

Overview of job profile for Level 2 (Associate, Technician)

Review of Systems Approach

Review course syllabi

Hands-on exercises with mechatronic systems, modules, and sub-systems

Commissioning in Industries / Software commissioning

Networking

Structured programming on mechatronic systems

Sequential programming

Introduction to process management and Lean

Factory simulation, Ball Point Pen Factory

Role of factory tours in study programs

Control structures of drive trains in mechatronic systems

Closed Loop/ Process Control in mechatronic systems

Utilization of simulated desktop systems in a classroom setting

Overview of Computer aided design (CAD), Computer aided manufacturing (CAM), and Computer numerical control (CNC) concepts

Machine elements in mechatronic systems, such as gearboxes

Microcontrollers in mechatronic systems

Hardware fault implementation and troubleshooting

Sample question review for Siemens student examination

Troubleshooting strategies for systems

Creation of sample lessons utilizing the Systems Approach

Review additional Level 2 requirements for mechatronic systems

Development of strategies for knowledge transfer from one system to another

Implementation workshop for implementation of SMSCP locally

Teilnahmevoraussetzung

Completion of Systems Approach Paradigm Week (SAPW) Instructor Certification course

Completion of Level 1 Instructor Certification course is strongly recommended

Teaching or industry background in Mechatronics or Electrical or Mechanical Engineering

Basic knowledge of Siemens PLCs and their programming

Hinweise

In this course you will work with TIA portal, PROFINET and PROFIBUS, the SIMATIC S7 product family, and LabView

Typ

Präsenztraining

Dauer

10 Tage

Sprache

en

