# SIEMENS

# 840Dsl Maintenance 1 w/ HMI Advanced

## General Information

| | |
|---|---|
| Course Code | SCT-SN84SM1A |
| Global Code | NC-84SLSIP |
| Length | 4 Days |
| CEUs | 2.6 |

## Audience

This course is designed for electrical/electronic end-user maintenance personnel for machine tools using the new SINUMERIK 840Dsl (Solution Line) controls. The course presumes the customer is using the PCU 50.3, Windows XP-based HMI Advanced software. Personnel using the PCU 20 / HT8 / or HMI TCU (Thin Client Unit) interfaces are urged to contact Siemens Customer Training prior to enrolling in this class. Soft Prerequisite: Microsoft Windows XP Expertise.

## Prerequisites

- None

## Profile

This course emphasizes the maintenance aspects of this new version of the SINUMERIK 840D. An overview of the softkey menus of the control is provided, including the basic principles of operating the control. Demonstrations are given on how to competently manage maintenance functions, and for back-up/restore functions of the NC and PLC series start-up. The class format is a mixture of lecture and hands-on exercises. SINUMERIK 840Dsl simulators are utilized to allow the student to build proficiency in control navigation and managing different forms of data.

This course does NOT cover the SIMATIC S7 PLC Programming language. Students who must troubleshoot the control to the PLC User program level should attend the SIMATIC S7 TIA Programming 1 course.

## Objectives

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

- Identify the major SINAMICS S120 hardware and indicators in an 840Dsl application.
- Access and utilize the major operating areas of the control.
- Edit and store machine data.
- Back-up and restore NC data to the internal hard drive.
- Back-up and restore PLC program data to the internal hard drive.
- Back-up and restore PROFIBUS drive data to the internal hard drive.
- Back-up and restore NC data to an external data medium.
- Back-up and restore PLC program data to an external data medium.
- Back-up and restore PROFIBUS drive data to an external data medium.
- Diagnose problems using SIEMENS generated alarm displays.
- Use on-screen help functions to help diagnose alarm related problems.

## Topics

1. Data back-up and restoration
   a. Back-up and restore of NC, PLC, and PROFIBUS drive data to the internal hard drive
   b. Back-up and restore of NC, PLC, and PROFIBUS drive data to an external data medium
   c. Back-up and restore of the hard drive using SYMANTEC Ghost
2. Diagnostic functions
   a. Fault diagnosis using SIEMENS generated alarms
   b. Fault diagnosis using the LED displays of the NCU
   c. Fault diagnosis using the LED displays of the ALM (Active Line Module)
   d. Fault diagnosis using the LED displays of the SLM (Smart Line Module)
   e. Fault diagnosis using the LED displays of the Motor Module
   f. Fault diagnosis using the displays of the 840Dsl in the areas DIAGNOSIS and START-UP
3. Hardware Overview
   a. NCU 7x0 series, NX10/NX15
   b. SINAMICS S-series modules
   c. Operator hardware components
   d. New hardware related to data back-up / storage
   e. PLC related hardware
   f. Set-up of Absolute encoders
   g. Set-up of Incremental encoders