Nano Basics

TheAutomationSchool.com

Learn how to setup, configure, and program **Allen-Bradley Micro800** Nano Programmable Controllers using CCW in Nano Basics

Level 1 Lesson Topics:
(Included with Standard and Extended courses)

Hardware
- Micro800 Controllers
- Selecting Components
- Hardware Unboxings
- Local Rockwell Representative

Software
- Downloading CCW Software
- Installing CCW on Windows 7, 10
- Update: Windows Patch Issues

Communications
- RSLinx Classic Configuration
- Setting up USB Comms
- Setting up Ethernet Comms
- Flashing Firmware

Programming
- Motor Control using Ladder Diagram routines.
- Part Sensing (LD) with Photo Eyes
- Machine Runtime using FBD
- Part Counting using FBD
- Performing Calculations using ST
- Exporting and Importing Programs

Level 2 Lesson Topics:
(Included with Extended course only)

Analog and Expansion I/O
- Using and Scaling Analog Inputs
- Using and Scaling Analog Outputs
- Using Universal Analog Inputs
- Using Plugin and Expansion I/O
- Using Serial Plug-In with Modbus

Variable Frequency Drives
- Controlling VFDs over Modbus
- Setting up VFDs on Ethernet
- Controlling VFDs over Ethernet

Human Machine Interfaces
- Creating a PanelView 800 Project
- PanelView 800 Motor Control Screen
- PanelView 800 Download & Test
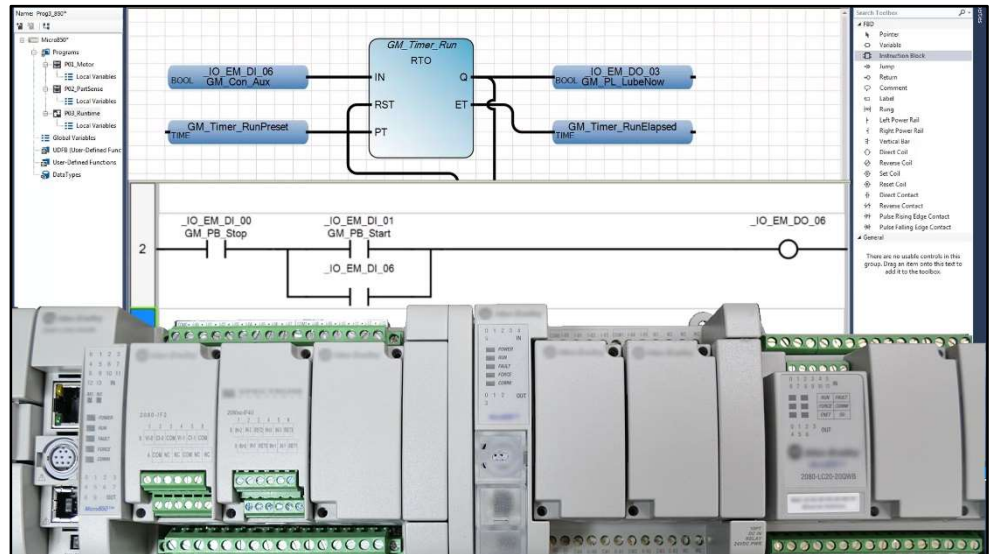
Nano Basics is designed for those students who have basic PLC knowledge and would like to learn how to setup, program, and troubleshoot the Allen-Bradley Micro800 line of Nano Programmable Controllers using Connected Components Workbench.

What students will learn:

- Understand the design of the Micro800 Family of Nano PLCs
- How to choose Micro800 components and configure a system
- How to get the free programming software and how it works
- How to setup Micro800 and RSLinx Ethernet and USB communications
- How to Flash Controller Firmware over Ethernet and USB
- How to create and test a Motor Control routine in Ladder Logic
- How to create and test a Part Sensing routine using Photo Eyes
- How to create and test a Machine Runtime routine in Function Block
- How to create and test a Part Counting routine in Function Block
- Hot to create and test a Mathematical Calculation routine in Structured Text
- How to Export and Import Micro800 Programs using CCW
- And much more in the Extended Edition!

What students need to complete hands-on exercises:

- Windows 7, 8, or 10 PC with Ethernet or USB port and an internet connection
- Free Connected Components Workbench programming software (how to get is covered in course)
- An Allen-Bradley Micro800 with USB or Ethernet communications, or
- Free Micro800 PLC Simulator included in Connected Components Workbench

Course Editions (Note: Online courses include instructor support, completion certificate, and lifetime access)

- **TAS-NAN21-O** Nano Basics Standard Online Course (Level 1 Topics, upgradeable to Extended) $49.99
- **TAS-NAN22-O** Nano Basics Extended Online Course (Level 1 and Level 2 Topics) $99.99