



Nelson Electric
Supply Company, Inc.



2017

**Educational Workshop Schedule
and Services Offerings**

Mark Your Calendar

	PLC Basic	Logix5000 Programming	Machinery Safeguarding	VFD Configuration	PanelView Plus	Intro to Manufacturing Intelligence	ControlLogix / Studio 5000	Ethernet/IP Fundamentals & Stratix 5700 Switch Config
January	17-18							
February		14-15						
March			7		14			
April	11-12			13		18-19		
May							23-26	
June		6-7	13		20			
July	11-12			13		18-19		
August								8-10
September		12-13	19		26			
October	10-11			12		17-18		
November		7-8						
December								

Training dates are subject to change. Please visit www.nelson-electric.com for the most up-to-date schedule.

Workshops Are Presented at Our Downtown Racine Location

The **Blue** shaded classes are hosted at Nelson Electric

The **Red** shaded classes are held at Nelson Electric but taught by Rockwell Automation

926 State St • Racine, WI 53404

Directions from the South

- Take I-94 north to Hwy 20
- Take Hwy 20 east to Hwy 31
- Turn north on Hwy 31 to Hwy C
- Turn east on Hwy C to State Street (Hwy 38)
- Turn east on State Street to LaSalle Street
- Turn north on LaSalle Street
- Enter our parking lot from LaSalle Street

Directions from the North

- Take I-94 to Hwy K
- Take Hwy K east to Hwy 38
- Take Hwy 38 south to LaSalle Street
- Turn north on LaSalle Street
- Enter our parking lot from LaSalle Street

Maps, directions and virtual tours of our three Wisconsin locations are available at our website.

Date of Interest - **Automation Fair**

November 15-16 2017
George R. Brown Convention Center
Houston, Texas

The premier event for automation and control information, services, and solutions.
www.automationfair.com

Call Shelly Wojciechowski at 262.504.3635 to register for all courses.

PLC Basic

Nelson Electric proudly offers this two-day PLC Basic workshop. Nelson's PLC/EOI Specialists Carmen Pillizzi and Don Goldbach use lectures and labs to familiarize students with the PLC family product

line.

The workshop covers configuring the hardware and learning basic addressing techniques. Programming and troubleshooting methods using Rockwell Software

RSLogix500 are also thoroughly discussed.

Tuition includes manuals and handouts to give each student the opportunity to become a PLC programmer.

Course dates: January 17-18
(Two days) April 11-12
July 11-12
October 10-11

Course # AWSSLC500BASIC • Tuition \$595.00
9:00am - 4:00pm
Continental breakfast & lunch are provided.

The Next Step Related training offered by Rockwell Automation
CCPS41 - SLC 500 and RSLogix 500 Programming
CCPS43 - SLC 500 and RSLogix 500 Maintenance and Troubleshooting

Logix5000 Programming

We are proud to offer this two-day course that provides students with a basic understanding of RSLogix5000 ladder logic instructions and terminology. Nelson's PLC/EOI Specialists Carmen Pillizzi and Don Goldbach will instruct and provide the students hands-on practice to efficiently program a Logix5000 controller while using the RSLogix5000 programming software. Students will gain a better understanding of Tasks, Programs, and Routines function as well as creating Tags. There will also be labs using Local and Distributed I/O over Ethernet demonstrating the advantages of

the Producer/ Consumer model and enhanced module capabilities. Additional labs include Processor to Processor communications, User Defined Data Types, and Add On Instructions. We also cover the basics of Ethernet I.P. addressing and 'Flashing' of the Logix hardware.

The individuals who have had little or no working experience with Logix5000 systems, but do have ladder programming experience, should attend this course. Tuition includes manuals and handouts to give each student the opportunity to become a Logix5000 programmer.

To successfully complete this

course, the following prerequisites are required:

- Ability to perform basic Windows tasks such as using a mouse, browsing for files, and manipulating windows
- Knowledge of common controller terms and operation
- Experience in other Rockwell Automation "Family of Programmable Controllers" such as SLC 500 or PLC 5 programmable controllers
- Ability to program ladder logic and common instructions

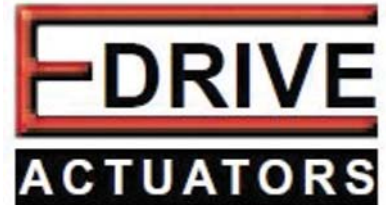
Course dates: February 14-15
(Two days) June 6-7
September 12-13
November 7-8

Course # AWSLOGIX5000BASIC • Tuition \$695.00
9:00am - 4:00pm
Continental breakfast & lunch are provided.

The Next Step Related training offered by Rockwell Automation
CCCL21 - RSLogix 5000 Level 2: Basic Ladder Logic Interpretation
CCP143 - RSLogix 5000 Level 3: Project Development

We are a full-line electrical distributor

Don't forget these other brands Nelson Electric supplies.



A Pentair Company

Wiring Device-Kellems

And many more...

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RSLogix 5000 Level 2: ControlLogix Maintenance and Troubleshooting

This four-day course provides students with the necessary resources and hands-on practice to efficiently troubleshoot a previously operational ControlLogix or other Logix5000 system (e.g., CompactLogix, FlexLogix, DriveLogix, and SoftLogix). It builds upon students' fundamental knowledge of common controller terms and operation, ability to identify and create fundamental RSLogix 5000 project components, and experience interpreting basic ladder logic. This course adds to students'

skill sets by introducing new tasks, such as connecting to a network, interpreting project execution, and editing ladder logic online. After practicing such skills, students will be presented with a systematic strategy for diagnosing and troubleshooting a variety of system errors, such as controller, I/O, and other hardware problems; noise-related problems; and software configuration problems.

After completing this course, students will be able to perform the following tasks:

- Monitor and edit tags
- Edit ladder logic and function block diagrams
- Apply preventative maintenance and troubleshooting strategies
- Troubleshoot controller problems
- Force I/O and toggle bits
- Troubleshoot digital, analog, and remote I/O
- Troubleshoot power supply and noise-related problems

Course dates: May 23-26
(Four days)

Course # CCP153 • Tuition \$2,160.00 • CEUs 2.8
8:00am - 4:00pm

Continental breakfast & lunch are provided.

EtherNet/IP Fundamentals and Troubleshooting & Stratix 5700 Switch Configuration for an Ethernet/IP Network

This three-day course is a combination of two Rockwell Automation classes and must be purchased together to attend.

First in the EtherNet/IP Fundamentals course (CCP180) you will learn to assign IP addresses to devices for communications over an EtherNet/IP network using tools such as BOOTP-DHCP Server software, RSLinx Classix software and rotary switches.

You will also learn to diagnose and resolve issues with devices on the network and monitor diagnostic information using web-based technologies and modify a web server module's data views and tag values.

The second and third days will focus on teaching you to configure a Stratix 5700 switch for industrial communications over an EtherNet/IP network (CCP179).

You will learn how to use the Device Manager Web Interface and Studio 5000 Logix Designer software to configure, secure and limit access to the switch.

Additional topics include monitoring the switch performance and status, and performing common functions such as resetting the switch.

Course dates: August 8-10
(Three days)

Course # CCP180 • Tuition \$871.00 • CEUs 0.7
Course # CCP179 • Tuition \$1,300.00 • CEUs 1.4
(combined) Tuition \$2,171.00 • CEUs 2.1

8:00am - 4:00pm

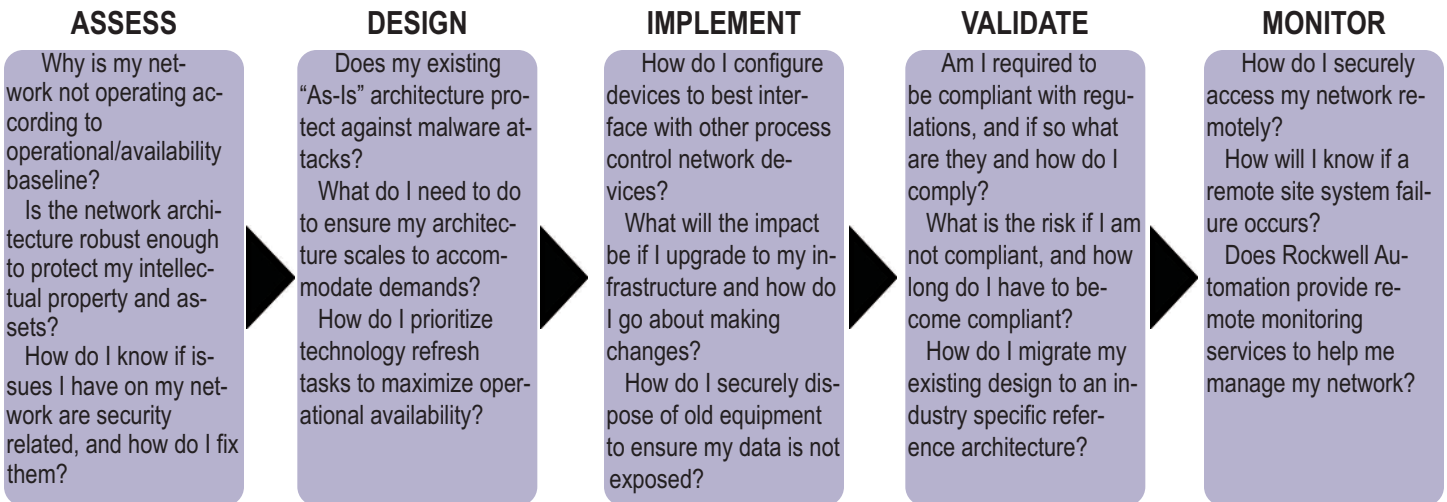
Continental breakfast & lunch are provided.

Network and Security Services

Implementation

Our Network and Security Services team is comprised of multi-discipline professionals with extensive industry expertise:

- Process control and manufacturing applications across all industries, including industrial network architectures
- Quantitative and qualitative analysis of security threats specific to industrial control systems
- Diagnosis and remediation of legacy network equipment and protocols including ControlNet, DeviceNet, DH+, Remote I/O and Fieldbus
- Development of global standards specific to industrial control systems and the manufacturing industry including NIST SP 800-82; Executive Order 13636 Cybersecurity Framework; DHS INL/EXT-06-11479; ISO/IEC-62443 (formerly ISA 99)
- Collaborative authorship of the Converged Plantwide Ethernet (CPwE) Design and Implementation Guide with Cisco



PLC-5 Programmable Controllers

A Whole New Meaning to Migration

Custom Solutions

While the PLC-5 packaged migration can help simplify the migration process, some more complex applications require additional support. Systems that would benefit from a custom-quoted migration solution may involve communications or functions such as:

- Those requiring PLC to PLC communications, redundancy, modifications to external devices or application functional changes
- Communications to DCS systems
- Including specialty modules such as DCM, Very High Speed Counter, 2760 RB Flexible Interface or motion modules
- Engineered as a safety instrumented system

With a custom migration solution, Rockwell Automation will work closely with you and Nelson Electric to determine what's needed to implement your PLC system migration. The conversion project has three steps, including on-site assessment, application conversion engineering, and start-up and acceptance.



Base Package

The in-kind migration includes:

- Up to 1,000 rungs of application code conversion
- Up to 5,000 tags updated Rockwell Automation HMI tag database
- 1756 ControlLogix Chassis
- 1756-L72 ControlLogix Controller
- 1756-PA72 or 1756-PA75 ControlLogix Power Supply
- 1756 ControlLogix Communication Module
- Replacement Digital I/O
- Wiring Conversion System
- One Year Assurance Integrated Support

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Creating a Workforce Development Strategy

Training Lifecycle



Assess

This step enables you to gauge the current abilities of your employees and better create individualized development plans.

Training Advisor

Training Advisor helps you determine a tailored training path for your workforce to obtain the knowledge required to successfully improve on-the-job performance. This tool helps you identify knowledge gaps hindering production performance and develop a training strategy that maximizes job performance and effectiveness.

Integrated Performance Assessment

An integrated performance assessment is a comprehensive on-site analysis of employees' job skills and knowledge levels of automation and control equipment for specific jobs and tasks (maintenance, programming, etc.). It includes supporting information and recommendations to improve your employees' performance while remaining closely aligned to your company's business and training goals.

Train

Using data from your assessment, you can leverage specific, flexible and customizable approaches to not only fit your employees' learning needs, but also fit your business' production goals.

Instructor-Led Training

We provide a comprehensive selection of first class industrial automation and craft skills courses to meet your changing needs. If you prefer instructor-led courses, there are options for how to best leverage the training experience.

E-Learning

In addition to the instructor-led options that Rockwell Automation offers, computer-based e-learning solutions are available as well. Using e-learning, your employees receive the flexibility to avoid travel costs and time away from production.

Apply

After your training is completed, Rockwell Automation has developed job aids and refresher tools so employees can continuously improve their skills and practice in an offline environment.

Begin to see Results and Application of Knowledge from Learning Engagements

- Workstations
- Job Aids
- Troubleshooting App

Measure

Using essential manufacturing metrics, you can leverage assessment data both pre and post-training to ensure the effectiveness of your training plan.

Understand the Value of Your Workforce Development Investment

- ROI Tool
- Pre and Post Testing
- Certificate Programs

Remanufacturing and Exchange Services

Your only source for factory-authorized repair on Allen-Bradley and Reliance Electric products

Benefits

- Proprietary remanufacturing process restores failed units to "like new" or better condition, extending equipment life and enhancing its performance
- Improve your overall equipment effectiveness (OEE)
- Stabilize your maintenance budget
- Reduce your unplanned downtime and frequency of repairs (longer Mean-Time-Between-Failure)
- Improve speed to change (receive repaired products faster, minimize compatibility problems)

Features

- Receive a 12, 18 or 24 month warranty on the entire unit, not just the replaced/repared components
- Ability to track your warranty, potentially saving you significant costs on unnecessary billings
- Only Rockwell Automation OEM specified components are used
- Includes firmware updated on your remanufactured products

Rockwell Automation offers three levels of Remanufacturing and Exchange Services:

Economy Services

Your failed or malfunctioning product is sent through our proprietary process and returned to you via normal shipping.

Standard Services

After your failed core is received at one of our depots, an exchange unit is shipped from the hub. If no exchange unit is available, your unit will be placed in the front of our productions schedule.

Priority Services

Obtain next day, morning delivery from over 50,000 remanufactured Allen-Bradley catalog items inventoried at our global parts hubs. Return shipping costs are waived if the failed, non-warranty unit is returned within 15 days. Emergency 24x7x365 service is also available.

Rockwell Automation Support & Services





Global Support. Local Address. Peace of Mind.

Providing the resources you need, when and where you need them, Rockwell Automation has an integrated, global network of ISO-certified repair centers, exchange hubs, field service professionals, IACET-recognized training centers, certified technical phone support centers and online tools.





www.rockwellautomation.com/solutions-services



Meet Your Everyday Technical Needs

Remote Support & Monitoring	Training Services	OnSite Services	Repair Services
<ul style="list-style-type: none"> Real-time product, system and application-level support Unlimited online resources and tools Live chat and support forms Secure equipment monitoring, alarming and diagnostics 	<ul style="list-style-type: none"> Instructor-led and computer or web-based courses Virtual classroom Training assessments Workstations and job aids 	<ul style="list-style-type: none"> Embedded engineering Preventative maintenance Migrations and conversions Start-up and commissioning 	<ul style="list-style-type: none"> Product remanufacturing Repair services on non-Rockwell Automation brands Annual repair agreements
			

Maximize Your Automation Investment

MRO Asset Management	Lifecycle Extension & Migrations	Network & Security Services	Safety Services
<ul style="list-style-type: none"> Comprehensive asset management planning Reliability services Global spare parts inventory Storeroom and firmware management 	<ul style="list-style-type: none"> Installed Base Evaluation Pinpoint obsolescence risk Tools and Lifecycle support service agreements to mitigate production risk 	<ul style="list-style-type: none"> Manage network convergence Security technology, policies and procedures services Network design, integration and validation services 	<ul style="list-style-type: none"> Safety assessments and remediation Safety design, integration and validation services
			

Visit the Rockwell Automation Support Center, <http://rockwellautomation.custhelp.com/> for technical information and assistance, plus:

- View technical/application notes
- Obtain software patches
- Subscribe for product/service email notifications
- Submit a Question, Live Chat, Support Forums and more

Visit www.rockwellautomation.com/support to select your country and find your local support information.

Call Shelly Wojciechowski at 262.504.3635 to register for all courses.

Rockwell Automation Services & Support

To develop the right maintenance strategy, many companies are collaborating with distributors like Nelson Electric. Rockwell Automation is uniquely qualified to help you meet your goals through their global resources, long heritage in the automation industry, integrated architecture, and broad portfolio of Services and Support.

Rockwell's Services and Support portfolio is delivered through an integrated network of remanufacturing facilities, exchange hubs, onsite support dispatch centers, training classrooms, remote support centers, and online tools. Through this network, you can obtain the technical information and resources your engineering and maintenance staff need to achieve and maintain an optimal automation environment - and improve your top and bottom line.

Shelly Wojciechowski • Nelson's Customer Support and CSM Coordinator

You can contact Shelly with all your questions regarding, or for quotes relating to everything on this page.

She can also track and expedite orders.

262.504.3635 • wojo@nelson-electric.com

Repair Services & Renewal Parts

Remanufacturing and exchange services for automation products and build-to-order legacy automation products.

With escalating downtime costs and tight delivery schedules, you can't afford to wait for replacement parts. When you need replacement parts for your Allen-Bradley products, there is no better choice than Rockwell Automation. They provide genuine OEM parts to ensure the proper functionality of your automation equipment and extend its service life. Many parts are stocked at their global network of repair centers and distributor partners and can be shipped anywhere in the world within 24 hours of order receipt.

Training Services

Instructor-led training, self-paced training and competency testing on automation and related topics.

Rockwell's comprehensive, flexible training portfolio is focused on helping customers develop a workforce that is ready to meet any challenge – and ultimately, improve production, lower turnover and increase employee morale. Identify skill gaps and improve job performance and productivity with the expertise of Rockwell Automation. They can help you bring together all the pieces of workforce training into a comprehensive workforce training solution.



TechConnect Remote Support Services

TechConnect is real-time, 8am-5pm phone support (24x7 option), comprehensive electronic support tools and software and flash firmware updates for your Allen-Bradley and Rockwell Software products.

Shelly can generate a TechConnect quote for you. She also issues reminders for expiring contracts.

Choose the TechConnect program that suits your needs to give your site unlimited, real-time access to Rockwell Automation's global network of Customer Support Centers and technical resources providing help installing, configuring and maintaining equipment and software, obtaining software updates, diagnosing and fixing operating problems, or performing basic programming tasks.

OnSite Support Services

Startup services, conversion services, preventive maintenance, extended parts and labor warranty, troubleshooting and repair of automation equipment and systems by Rockwell Automation field support engineers.

Speed to market has emerged as a top driver for manufacturers looking to improve their competitive advantage. From start-up to conversions, Rockwell Automation has the technical expertise to help you increase uptime and optimize equipment performance. Their global network of field service professionals can perform services on both Rockwell Automation and non-Rockwell Automation products.

Available on an as-needed, scheduled, or full-time basis, they help you meet your specific needs throughout the lifecycle of your maintenance strategy.

Put Our Experienced Team to Work for You.



Jeff Genac

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Shelly Wojciechowski

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At Nelson since 1991
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Catalog # CATATCSCHED2017



* Voice mails are automatically
sent to their cell phones.