

# 2020-21

## Standard Electric

# University

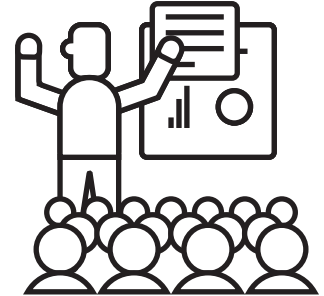


# Standard Electric University Course Catalog 2020 - 2021

## *Bringing you the training you need - when you need it!*

Offering the latest in technical information and education to our customers is a priority at Standard Electric Supply Co. We started Standard Electric University in 2018 as a means to provide ample opportunities for you to stay abreast of the latest technologies and innovations.

We provide hands-on, classroom style training environments at our local offices, making it convenient for you to attend. We also offer webinars that allow you to receive training and information without leaving the office. This year we started a new series called Tech Talks with our Technical Solutions Team (TST), where our engineering experts discuss a technical hot topic and field your questions during these virtual sessions.



Our classes cover a wide array of technical topics ranging from electrical, safety, updates to electrical codes as well as automation, HMI, PLC, and robotic innovations. Whether you or your team need to solve an immediate problem, quickly enhance your skills on new technology, or need an in-depth, intensive information session, our classes and webinars are your solution.



Offering these training opportunities reinforces our commitment to provide you with fanatical customer service. If you don't see the training you are looking for, let us know. We will do our best to meet your need.

If you have an interest in our offered classes or you would like a class customized to meet your specific needs, contact Joanne Moss at (800)-776-8222.



# Standard Electric University Course Schedule 2020 - 2021

All classes and webinars are presented by our Technical Solutions Team (TST) and our valued suppliers.

**APL = Appleton | CHI = Chicago | INDY = Indianapolis | MKE = Milwaukee | WAR = Warsaw, IN**

Week of	Description	Location
<b>2020</b>		
October 27	Webinar: Selecting the Right Enclosure for Food & Beverage Applications	
November 11	Tech Talk: I/O Link, What Is It and How Can It Increase My Productivity?	
November 18	Webinar: Fuse Efficiency, Cost Savings and Safety: Mersen Makes it Simple	
December 9	Tech Talk: Finding Your Remote IO Solution for Hard to Solve Applications	
<b>2021</b>		
January 13	Tech Talk: Once Your VFD is Functional, How Do You Incorporate Safety Activation From This Controller? It's Easier Than You Think!	
February 10	Tech Talk: Show Me How to Use an HMS Ewon Cosy or Flexy for a Remote Connection	
March 10	Tech Talk: The 10 Commandments of PLC Programming - Thou Shall Not Use Timers for Idol Tasks	
March 22-26	Class: I/O Link - What is it and how can it improve your bottom line?	APL/MKE
April 14	Tech Talk: Part 2: Helpful Tips and Tricks for Basic Automation Tasks	
April 26-30	Class: Trouble Free Drive Installation	APL/MKE
May 12	Tech Talk: What is a DTM and How Can it Help Me?	
May 24-28	Class: Safety by Design for Lockout/Tagout	APL/MKE
June 9	Tech Talk: Why do I Need a Purge and Pressure System? Introduction to Pepperl+Fuchs' Purge and Pressure System Offering	
June 21-25	Class: Key Impact of UL61800-5-1 Replacing UL 508C	APL/MKE
July 14	Tech Talk: Advanced Structured Programming	
July 26-30	Class: Achieving Higher Short Circuit Current Ratings for Industrial Control Panels	APL/MKE
August 11	Tech Talk: The Power of Using a High-level Language in Your PLC Code	
August 23-27	Class: NEC 500-516 Hazardous Location Methods and Code	APL/MKE
September 8	Tech Talk: Augmented Reality for Industrial Applications	

\*Classes will be conducted in accordance to the state and local social distancing and assembly guidelines. All classes and webinars are subject to change. New classes and webinars are often offered after the catalog has been printed. Visit [www.standardelectricsupply.com/standard-electric-university](http://www.standardelectricsupply.com/standard-electric-university) for the most up-to-date information.

## Appleton Office

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Appleton, WI 54911  
920-730-8800

## Chicago Office

1055 Stevenson Court  
Roselle, IL 60172  
630-860-0236

## Milwaukee Office

222 N. Emmer Lane  
Milwaukee, WI 53233  
414-272-8100

## Indianapolis Office

9900 Westpoint Drive, Suite 142  
Indianapolis, IN 46256  
317-773-0400

## Warsaw Office

960 Executive Drive  
Warsaw, IN 46580  
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# Standard Electric University Class & Webinar Descriptions October - December 2020



## Selecting the Right Enclosure for Food & Beverage Applications // October 2020

Knowing what type of enclosure to use in each area of the F&B plant can help you improve hygiene, food safety, reduce maintenance costs, and reduce operational costs. During this webinar you will learn:

- ◇ The “Hygienic Zones” of a F&B plant and the various requirements for enclosures
- ◇ How a Hygienic Design Enclosure can help you in those problematic wash down areas
- ◇ What F&B industry standards you can use to build your specifications for your F&B processing machines

If you are involved in engineering, maintenance and operations, quality, or food safety, this webinar is ideal for you. Sponsored in collaboration with Rittal.



## I/O Link: What is it and How Can it Increase My Productivity? // November 2020

During this webinar you will learn about the fundamentals of I/O-Link, how it works, and what is required to get started. This webinar will help you discover the benefits of using this open protocol network using standard components. This webinar session will review:

- ◇ Hardware components
- ◇ Software tools
- ◇ Online resources



## Fusing Efficiency, Cost Savings and Safety: Mersen Makes it Simple // November 2020

Fuses are not all that technical or complicated. Nor are they components where you want to spend a lot of time worrying about managing them. Understanding the fuse usage in your facilities is fundamental to effectively managing your plant inventory, operating costs, code compliance, and workplace safety. Mersen’s Fuse Control program is designed to help you streamline your fuse inventory, saving you money and increasing workplace safety. Learn about:

- ◇ Overloads and short-circuits
- ◇ Fuse applications
- ◇ Current limitation
- ◇ UL fuse classes
- ◇ 5S system for fuses

If you are in electrical maintenance, storeroom management, or plant safety this class is ideal for you.



## Finding Your Remote IO Solution for Hard to Solve Applications // December 2020

During this webinar we will look at solving unique remote IO applications using Wago’s flexible 750 series IO system. Topics that will be discussed are:

- ◇ IO options for extreme conditions, hazardous environments, and power and motor monitoring
- ◇ The many PLC networks the Wago 750 series will work with
- ◇ Using the same IO system across multiple PLC manufacturers
- ◇ Using Wago’s online configurator to help build your IO node

Attendees will leave with a keen understanding of the broad range of applications you can solve using the WAGO 750 Remote IO system. If you are an engineer, industrial electrician, or in plant maintenance, this webinar is ideal for you.



# Standard Electric University Class & Webinar Descriptions January - March 2021



## Once Your VFD is Functional, How Do You Incorporate Safety Activation From This Controller? It's Easier Than You Think! // January 2021

This 30 minute webinar will cover the configuration of STO in a G120 VFD via PROFISAFE over PROFINET. Previous knowledge of PLCs and Drives is a plus. Topics that will be discussed are:

- ◇ Review previous lab for understanding of control
- ◇ Selection of preconfigured Siemens Safety Telegram 30
- ◇ Retrieving, opening, and using the Safety Block and Data Types
- ◇ Connecting the block to the drive
- ◇ Verify functionality



## Show Me How to Use an HMS Ewon Cosy or Flexy for a Remote Connection // February 2021

This webinar will show you the three easy steps in establishing a remote connection with your equipment (PLCs, HMIs, Drives, etc.) Topics that will be discussed are:

- ◇ What software is needed and where to download it
- ◇ Setting up your Talk2M account
- ◇ Three steps in configuring your Cosy
- ◇ Connecting to your remote devices
- ◇ Using M2Web to monitor your Ewon devices

Attendees will leave with a keen understanding in setting up an Ewon Cosy. If you are in engineering and routinely service your customer's issues, this webinar is ideal for you.



## The 10 Commandments of PLC Programming - Thou Shall Not Use Timers for Idol Tasks // March 2021

The basic principles of PLC programming are easy to learn but their proper application requires a little more effort. The timer function is one of the easiest functions, so it's easy to understand how to include it into PLC logic, it's also one of the easiest to misapply. This webinar will look at the two most egregious misapplications of timers in PLC logic:

- ◇ Do not use timers to solve a "Relay Race"
- ◇ Do not use timers to control communications



## I/O Link - What is It and How Can It Improve Your Bottom Line? // March 2021

IO-Link is a simple, flexible, and secure open communication technology that enables continuous communication at the sensor level. Attendees will learn more about:

- ◇ Flexible and secure open sensor communications
- ◇ Reducing inventory
- ◇ Increasing efficiency
- ◇ Enabling benefits of IIoT connectivity

Attendees will leave with an important understanding of I/O Link and its capabilities to decrease engineering time and increase efficiency. If you are any type of engineer involved with sensor technology, you will benefit from this class. Sponsored in collaboration with Pepperl & Fuchs.



# Standard Electric University Class & Webinar Descriptions

## April - May 2021



### Part 2: Helpful Tips and Tricks for Basic Automation Tasks // April 2021

This webinar will teach you about the trends in the small-controllers segment. We will highlight the applications possible and the tools available to increase your productivity and efficiency. During this webinar you will learn how to:

- ◇ Setup a trace function and cross reference errors in a program
- ◇ Simulate hardware to troubleshoot a program
- ◇ Establish a device connection

Attendees will leave with a keen understanding of building an error free TIAportal program. If you are in engineering or maintenance, this webinar is ideal for you.



### Trouble Free Drive Installation // April 2021

Learn best practices as it relates to a VFD as well as an overview of operation and motor control. You will learn:

- ◇ Features and benefits of VFD cabling (fast switching IGBTs and extending motor's life)
- ◇ Proper termination practices
- ◇ Overview of operation and motor control
- ◇ Best installation practices with your VFD
- ◇ Why is filtering important

VFD cabling practices, NFPA 79 VFD cable considerations, how to minimize harmonics and where to properly apply VFD filters/reactors will also be discussed. If you are in any industry using VFD products, this class is for you. If your role is maintenance, engineering or technician working on VFDs, this class would be ideal for you. Sponsored in collaboration with ABB.



### What is a DTM and How Can it Help Me? // May 2021

This 30-minute webinar will cover how a DTM (Device Type Manager) operates for an industrial application, why it is helpful, and how it can be implanted in a project to improve productivity. Some of the topics that will be discussed during this webinar are:

- ◇ Overview of the FDT Group
- ◇ What a DTM is
- ◇ How a DTM can be used in an industrial application
- ◇ Programming example



### Safety By Design for Lockout/Tagout // May 2021

This class offers the best practices in industry today to reduce and eliminate risk in your LOTO procedures. Both electrical & mechanical will be discussed. Participants will get a better understanding of today's standards.

- ◇ Risk control hierarchy and the 6 stages
- ◇ Methods to mitigate/eliminate risk
- ◇ Risk reductions when no other options exist

Attendees will leave with a keen understanding of opportunities to reduce risk using the risk control hierarchy, today's best practices and drive productivity to new levels in their LOTO procedures. If you are an electrician, maintenance worker or member of the corporate safety team, this class is ideal for you. Sponsored in collaboration with Grace Engineered.



# Standard Electric University Class & Webinar Descriptions

## June - July 2021



### Why do I Need a Purge and Pressure System? Introduction to Pepperl+Fuchs' Purge and Pressure System Offering // June 2021

This webinar will cover why a Purge & Pressurization System is important and what Pepperl+Fuchs' current producing offerings are. Not having a Purge & Pressurization System can lead to your product installation not being allowed and could possibly lead to death. During this webinar you will learn about:

- ◇ What system(s) can be utilized
- ◇ Alternative methods
- ◇ Weighing the positives and negatives



### Key Impact of UL61800-5-1 Replacing UL 508C // June 2021

UL 508C is being replaced at the request of the industry with UL61800-5-1. This new standard was effective February 1, 2016 and clarifies test methods and definitions of how ratings are obtained. Upon completion, you will be able to:

- ◇ State the new UL standard number relating to short circuit ratings for VFDs
- ◇ Explain the goal of the new UL standard
- ◇ State if the prospective short circuit current can impact a VFD
- ◇ Explain if an enclosure can help obtain higher short circuit current ratings
- ◇ Determine if short circuit current ratings with circuit breakers are available for VFDs

This seminar will cover the reasons this new standard is being implemented and how it will help better choose proper equipment. Sponsored in collaboration with Schneider Electric.



### Advanced Structured Programming // July 2021

This webinar will provide an outline of a modern structured program as well as:

- ◇ Compare subroutines
- ◇ Parameter passing to subroutines
- ◇ Bring together the anatomy of a structured program

Attendees will leave with a basic understanding of structured programming. If you are a programmer in engineering or maintenance, this advanced webinar is ideal for you.



### Achieving Higher Short Circuit Current Ratings for Industrial Control Panels // July 2021

New requirements of NEC 409.22 and 670.5 make it very clear that end users must specify an adequate SCCR (Short Circuit Current Rating) for their industrial control panels and machine control panels.

- ◇ Learn how the choice of the right fuse can easily raise SCCR to safe levels
- ◇ Review the importance and safety implication of adequate SCCR
- ◇ Provide a simple overview of low voltage UL listed current limiting fuses
- ◇ Demonstrate how UL 508A Supplement SB is used to determine panel SCCR
- ◇ Give examples of how the use of type-tested components and current limiting fuses can increase panel SCCR

Attendees will leave with a keen understanding of short circuit protection, relevant code requirements, and how to increase SCCR of panels using UL508A. If you are in equipment manufacturing, panel building or industrial maintenance or your role is a designer, engineer, or electrician this class is ideal for you. Sponsored in collaboration with Mersen.



# Standard Electric University Class & Webinar Descriptions August - September 2021



## **The Power of Using a High-Level Language in Your PLC Code // August 2021**

This webinar will introduce the use of the higher level programming language SCL (Structured Control Language) in Siemens S7-1200/1500 PLC's. Topics that will be discussed are:

- ◇ Applications where a high-level language helps
- ◇ Look at the SCL programming tool in the TIA Portal programming environment
- ◇ Accomplish a simple task in the S7 world using SCL

Attendees will leave with a keen understanding of the use of SCL in S7 PLC's. If you are in the role of PLC code development, this class is ideal for you.



## **NEC 500-516 Hazardous Location Methods and Code // August 2021**

In this class, you can expect to further understand how NEC 500-516 is laid out to make referencing these articles easier.

- ◇ Demonstrate installation methods and maintenance of Nema 7 & 9 enclosures
- ◇ Deep dive into seal-off application demonstrating newest installation methods
- ◇ Highlight installation exceptions found in articles 500-516

Attendees will leave with a keen understanding of classes, divisions, and groups as designed by the NEC. If you are in oil and gas, waste water treatment, or heavy industrial, or if your role is an electrical engineer, project manager, or field electrician, this class is ideal for you. Sponsored in collaboration with Lakeshore Electric.



## **Augmented Reality for Industrial Applications // September 2021**

Would you be interested to learn about the latest and greatest technology from Schneider Electric? How about a unique and innovative solution that leverages augmented reality? This webinar will cover the EcoStruxure Augmented Operator Advisor solution for industrial applications.

- ◇ What is EcoStruxure?
- ◇ Comparison of Augmented Reality vs. Virtual Reality vs. Traditional HMIs
- ◇ Generating POIs in AOA Builder software
- ◇ Tools available to get started
- ◇ Live demonstration

### **How to Register for Courses**

- Register online at [www.standardelectricsupply.com](http://www.standardelectricsupply.com)  
\*scroll to bottom of home page, click on Training & Seminars, scroll down and click on Standard Electric University, click bottom button to register
- Call **800-776-8222**
- Contact your Standard Electric Supply Co. **Account Manager**
- Email Joanne Moss at [jmoss@standardelectricsupply.com](mailto:jmoss@standardelectricsupply.com)

