

## Evening Technical Presentations

### North Quad

Tuesday, July 28, 2020

6:00pm – 9:00pm

\*\*\*Room numbers are subject to change\*\*\*

#### **Coyne Pediatric Basic Life Support/First Aid**

Coyne First Aid, Inc.

Instructors - Craig Coyne and Charley Young

**Room 2135**

This course includes the latest information on how to teach and perform the lifesaving skills of CPR for children and infants. The course identifies the six major causes of fatal childhood injuries, and the ways and means to prevent them.

Cardiac arrest in this age group is rarely primarily of cardiac origin. It is more commonly caused by respiratory failure resulting from a variety of injuries or medical diseases. In the vast majority of cases, you are dealing with a preventable problem.

#### **Conduit: Grounding & Bonding, Electro-Magnetic Interference, and Corrosion Protection**

Steel Tube Institute

Instructors – Dale Crawford, Ray Horner and  
Joe Andre

**Room 2185**

The session will summarize NEC requirements for grounding & bonding including the effectiveness of conduit as an equipment grounding conductor. It will also focus on electro-magnetic interference mitigation utilizing the *GEMI*<sup>®</sup> (Grounding and Electrical Magnetic Interference) software. The course will review the results of a recent GA-Tech grounding and EMI analysis study. Finally, an overview of *corrosion protection requirements* and manufacturers' installation guidelines will be discussed.

## **Hart Calibration, Instrumentation Maintenance and the Fluke-754 Calibrators (Fluke Corporation)**

Fluke Corporation  
**Room 1185**

Instructors – Jim Shields and Bob Crepps

The Fluke-754 calibrators are utilized in the current Instrumentation Curriculum. These calibrators are used for teaching students the finer elements of calibration and maintenance of temperature and pressure of HART transmitters.

## **Identify, Solve and Prevent Industrial Ethernet Network Cable Problems**

Fluke Networks

Instructors – Jim Davis, Dave Ripple and  
Harvey Trager

**Room TBD**

Over 50% of Industrial Ethernet problems are related to network cables. Commissioning delays and intermittent machine downtime are generally addressed with guesswork rather than root cause identification. In this session you will learn cable test guidance, applicable standards (TIA-568, TIA-1005, ISO 11801), troubleshooting methods, and pro-active steps to prevent problems. Hands-on with several cable testers.

## **Incident energy and the NEC with an eye on electrical worker safety**

EATON-Bussmann Division  
**Room 1255**

Instructor – Tom Domitrovich

This session will have an arc reduction focus covering the following topics:

Arc reduction and the NEC:

- 110.16 – Labeling requirements and an insight to 1584
- 240.87 – Circuit breakers and incident energy reduction
- 240.67 – Fuses and incident energy reduction

Power system arc flash vulnerabilities:

- Service entrance equipment
- First panel on secondary of the transformer

70E / 70B and 70 – Understanding the importance of the trilogy

At the end of the session, there will be four (4) drawings. Must be a JATC trainer or Committee member and present to win.

## **Integrating Motor Drives and PLCs**

American Technical Publishers

Instructors - Glen Mazur and Julie Welch

**Room 2175**

Electric motor drives (AC or variable-frequency drive) are an increasingly common solution for versatile and efficient motor operation. Integrating drives with programmable-logic controllers (PLCs) is the next step in developing even more robust and flexible motor control systems. The knowledge and skills needed to install and maintain these systems are essential to the workforce. This hands-on training mini-course provides an overview of electric motor drives and PLCs and focuses on practical, hands-on techniques for teaching fundamental operating principles, wiring, control devices, programming, and troubleshooting on common industrial equipment. Participants will leave with numerous instructional tips for effectively teaching electric motor drives and PLCs together.

## **Programmable Logic Relays and Their Place in the Classroom**

Indianapolis Electrical JATC

Instructor - Paul Meyers

**Room 1265**

This evening course will highlight cost-effective classroom activity labs to assist instructors in the Blended Learning approach for programmable controller training.

## **Wireless Lighting Controls and the Benefits to Electrical Contractors**

Lutron Electronics Co., Inc.

Instructors – Jeremy Forster and Tim Babb

**Room TBD**

Project uncertainties, shrinking job timelines and increasing code and customer requirements are just a few of the challenges facing electrical contractors today. In this session we'll discuss how the use of wireless lighting controls can help mitigate the risk associated with these challenges by covering the components of a wireless lighting control solution, going through a code driven design exercise and getting hands on time with programming a control system.