

2017 NTI EVENING TECHNICAL TRAINING

Tuesday, August 1, 2017

2017 NEC® CODE CHANGES: EMPHASIS ON OVERCURRENT

North Quad Room 2255	<p>Sponsored by: EATON. Instructors: Tom Domitrovich and Dan Nesser.</p> <p>This session will present and discuss significant 2017 NEC® changes related to overcurrent protection, surge protection, and more. A few of the changes include: 90.7, 110.3(C), 110.14(D), 110.16, arc flash reduction in new 240.67 and revised 240.87, several requirements related to equipment short-circuit current ratings.</p> <p>Bonus 1: Class will be supplemented with handout for reading some equipment labels for vital information to comply with rating requirements.</p> <p>Bonus 2: Class will provide overview of the Eaton Experience Centers and Eaton Satellite Assembly facilities which JATCs and contractors can schedule training sessions and tours.</p> <p>Bonus 3: At the end of this informative session, four fuse sample kits for training will be awarded on a lottery basis from the pool of attendees.</p>
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3-PHASE HANDS-ON LAB FOR POWER QUALITY

North Quad Room 2185	<p>Sponsored by: FLUKE. Instructor: Steve Uhrich.</p> <p>Measure 3-phase and 1-phase loads using PQ features, V, A, Hz, Scope, in rush, Harmonics, KW, KVA, KVAR and PF.</p>
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CONDUIT BENDING INNOVATIONS WITH SOUTHWIRE

North Quad Room 2245	<p>Southwire will demonstrate the latest bending products for 3/4" to 2" conduit that allows the user to bend pipe safer with less effort.</p> <p>Many electricians dread the fatigue that comes with bending, knowing that having to bend over for long periods of time will put a strain on their backs and possibly cause injury over time. Southwire is proud to present the BENDstation™ PRO, BENDstation™ Rigid and BENDMax™ Power Bender.</p> <p>The BENDstation™ concept offers maximum optimization of workspace, incorporating material handling, bending, cutting and threading into one mobile unit. The BENDstation™ PRO and BENDstation™ Rigid are mobile conduit bending workstations for 3/4" and 1" EMT, IMC and rigid conduit.</p> <p>BENDMax™ Power Bender, a mobile, all-in-one, unique power bender for 3/4"- 2" EMT, IMC, and Rigid conduit that features a revolutionary elevation control. This control improves ergonomics and overall safety of the electrician.</p>
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DRONE APPLICATION IN THE ELECTRICAL INDUSTRY AND REMOTE PILOT CERTIFICATION

North Quad Dining Hall	<p>Sponsored by American Technical Publishers. Instructor: Carl Hansen.</p> <p>Drones are growing in importance as a valuable tool for the electrical industry. Construction, maintenance, and troubleshooting tasks can be enhanced with this technology.</p> <p>New drone capabilities in visual data acquisition and airborne tasks have also reduced the potential for injury with traditional work practices.</p> <p>In late 2016, the FAA introduced new mandates and requirements for commercial drone use. This class will provide an overview of drone applications in the electrical industry and the steps in obtaining pilot certification in compliance with FAA CF 14, Part 107 sUAS requirements.</p>
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HART CALIBRATION, INSTRUMENTATION MAINTENANCE AND THE FLUKE-744 AND 754 CALIBRATORS.	
North Quad Room 1185	<p>Sponsored by FLUKE. Instructor Jim Shields and Bob Crepps.</p> <p>The Fluke-744 and 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.</p>
MEET THE FOA AND LEARN ABOUT FIBER OPTIC NETWORK DESIGN	
North Quad Room 1175	<p>The Fiber Optic Association (FOA) has partnered with the <i>electrical training ALLIANCE/NJATC</i> for almost two decades to train instructors on fiber optics. This year, FOA is introducing a unique new textbook, The FOA Reference Guide To Fiber Optic Testing. This new textbook and reference book is aimed at those who teach fiber optic courses and have asked for a textbook on testing, the most complex and difficult topic in fiber optics. The book is intended as a reference book for Fiber Optic Techs, and the definitive reference for FOA CFOS/T fiber optic specialist in testing certification.</p> <p>Join the FOA for a presentation covering fiber optic testing by author Jim Hayes and get a free copy of the new FOA design textbook. The FOA testing specialist curriculum updates and FOA CFOS/T certification will also be reviewed. Discussion will also include how to add this and other FOA certification courses to your programs. The FOA staff will be at the session to review the FOA and its other programs. If you have questions for the FOA staff or are interested in fiber optic training, come to the session.</p>
POWER QUALITY: SYMPTOMS, SOURCES AND SOLUTIONS	
North Quad Room 1265	<p>Sponsored by: EATON. Instructor: Dan Carnovale.</p> <p>Power Quality issues in electrical distribution systems can be very detrimental to the electrical distribution system equipment and utilization equipment. This session will provide the trainer and contractor important knowledge in identifying power quality issues including harmonics, voltage variations and transients.</p> <p>Class will focus on identifying symptoms of these power quality problems, identifying the source of the issue and highlighting available solutions for resolving these power quality issues.</p>
SAFETY THROUGH DESIGN AND PROPER INSTALLATION OF HAZARDOUS LOCATION	
North Quad Room 1255	<p>Sponsored by EATON Crouse Hinds. Instructor: Robert Potter, Jr.</p> <p>Increase your manufacturing plant and job site safety through understanding the design and installation procedures of Class I hazardous location enclosures. This lecture will provide insight to the National Electrical Code selection and installation requirements for enclosures installed in areas containing flammable gases, liquids, and vapors, along with the catastrophic ramifications of improper installation or neglectful maintenance. Understand why those numerous bolts are required, why flame paths need to be free and clear of corrosion or debris, and how the "fully engaged" threads play a safety role in our conduit systems.</p> <p>Because "a picture is worth a thousand words", the presentation will include video demonstrations of accurate installation product performance in addition to the consequences of incorrect installation or maintenance and failed operation.</p> <p>Attendees will receive the Eaton Crouse-Hinds 2017 Code Digest, which is a reprint of Chapter 5 of the National Electrical Code, in addition to detailed NEC® insight, drawing examples and NFPA documents. Understand your role in plant and job site safety.</p>
TEACHING ELECTRIC MOTOR DRIVES.	
North Quad Room 2175	<p>Sponsored by American Technical Publishers. Instructor: Glen Mazur.</p> <p>Electric motor drive (AC or variable frequency drive) installation and retrofitting are increasingly more popular as a versatile and energy-efficient solution in the industry. This hands-on training mini-course provides an overview of electric motor drives and focuses on practical, hands-on techniques for teaching fundamental operating principles, wiring, control devices, programming, and troubleshooting on common industrial equipment. Many activities addressing power monitoring, retrofitting, and test instruments will be covered.</p> <p>Participants will leave with numerous instructional tips for effectively teaching electric motor drives.</p>