

Spring 2010

Continuing Education Courses

Presented by:

*The Electrical Association of
Philadelphia*

GROUNDING & BONDING

Article 250, Grounding and Bonding, is the most important Article in the NEC and you won't believe what you don't know about it! "Secrets of Grounding and Bonding" includes dwelling units, commercial and industrial properties, electric services, transformers, and switchgear. By *using real-world examples* in conjunction with the **corresponding NEC language**, the nuts and bolts of grounding every type of equipment will be revealed. Knowing the correct methods of grounding and bonding will provide the safest possible electrical installations while saving the installer maximum dollars by not doing it wrong and especially by not overdoing it. Learn the secrets to making sure the overcurrent protective device operates to *protect lives and property*. "Secrets of Grounding and Bonding" presented by Mike Hofkin is one of the most lively and entertaining shows on the market.

CEUs: 8 hours for Philadelphia,
New Jersey and Delaware
Date: Friday, January 29, 2010
Schedule: 7:00 a.m. – Registration
7:30 a.m. – 4:00 p.m. Course
Cost: Member Rate - \$269
Non-Member Rate - \$394
Location: The EAP Offices
Plymouth Meeting, PA
(Directions with confirmation)
Instructor: Michal Hofkin

Required Text / Materials

– 2008 National Electrical Code® (NFPA 70™) – Bring your own.

*“Presentation
was excellent.
He knew what we
do hands on from
past experience.”*

About the Instructor

Michal Hofkin has been teaching NEC related material for over 18 years. Known throughout the area as an exceptional public speaker, Mr. Hofkin will not only provide you with the information that you need, but he will deliver it in a lively, upbeat format that will keep you entertained as well. He is an Electrical Inspector with Middle Atlantic Inspections, Inc., the Chapter Secretary for the Benjamin Franklin Chapter of the IAEI, a State of New Jersey Certified Instructor, and a professional instructor for many

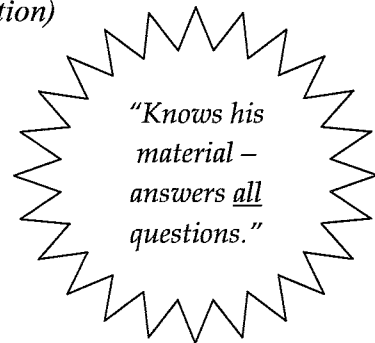
NEC...BRANCH-CIRCUITS, FEEDER, & SERVICE CALCULATIONS

This seminar is a must for electrical contractors and maintenance electricians who *add additional loads to existing circuits*, and who also *install new branch circuits, feeders and services*. It's also useful for the electrical engineers and design professionals who *design new systems and retrofit existing systems*. Use this as a refresher on this area of the 2008 code. And let's not forget about the inspectors who must *review plans and inspect the installations*. **Come one come all!**

CEUs: 8 hours for Philadelphia and Delaware
Date: Friday, February 12, 2010
Schedule: 7:00 a.m. – Registration
7:30 a.m. – 4:00 p.m. Course
Cost: Member Rate - \$269
Non-Member Rate - \$394
Location: The EAP Offices
Plymouth Meeting, PA
(Directions with confirmation)
Instructor: Ernie Davis

Required Text / Materials

- National Electrical Code Book 2008 – Bring your own.



About the Instructor

Member: I.A.E.I., N.F.P.A. and E.A.P.
Past President of the Eastern Section of I.A.E.I.

Mr. Davis has been in the electrical industry forty-four years. He is a graduate of Bok Vocational and Technical High School, Philadelphia School District. From graduation he progressed from an electrical trades trainee, electrician, electrical foremen, to maintenance supervisor. Mr. Davis is an electrical contractor licensed in the City of Philadelphia, State of New Jersey and City of Chester. He is also a Pennsylvania UCC Certificated Electrical Inspector in categories 11, 19, and 25, as well as a Licensed Electrical Inspector City of Philadelphia.

RESIDENTIAL ELECTRIC SYSTEMS

Take this opportunity to become an expert on the residential wiring rules. Save money by not making mistakes when wiring a house or an addition. This course will pay for itself many times over. Learn the new rules, delete the old wives' tales and bust those myths. Come to the class if you want to find out the answers to these questions:

- Is somebody pulling my leg or do I really have to install "weather resistant" receptacles outside?
- When can I finally start using my 2008 NEC?
- Is it really a requirement to GFCI protect every duplex receptacle in the basement?
- Does every receptacle in the house have to be tamper resistant?
- Can I install a GE circuit breaker in an old Murray panel?
- What's the largest size wire ever required to be connected to the ground rod?
- What do you mean I don't have to ground to the PVC water pipe?
- Should I bond a ground wire to the metal gas line or not?
- Do I really need two electric utility meters for a solar photovoltaic system in PECO territory?
- My inspector insists on AFCI protection for the bedroom circuits. The existing bedrooms share the neutral of a multi-wire circuit, the walls are rocked, spackled and painted already. What am I to do?
- Why can't I continue to use the old style "mud flap" type of receptacle cover outdoors?

CEUs:	8 hours for Philadelphia, New Jersey and Delaware
Date:	Friday, February 19, 2010
Schedule:	7:30 a.m. – Registration 8:00 a.m. - 4:30 p.m. Course
Cost:	Member Rate - \$269 Non-Member Rate - \$394
Location:	The EAP Offices Plymouth Meeting, PA (Directions with confirmation)
Instructor:	Rich Van Wert

Required Text / Materials

- There are no required texts for this course.
- Bring your own copy of the 2008 NEC.

About the Instructor

Rich Van Wert is President of Benjamin Franklin Chapter of the International Association of Electrical Inspectors (IAEI), Senior Electrical Inspector for Middle Department Inspection Agency, Commonwealth of Pennsylvania UCC Inspector, City of Philadelphia Electrical Inspector and State of New Jersey Approved Instructor No. 359.

Rich has been employed in the Electrical Industry for more than 40 years. He is currently a Senior Electrical Inspector with Middle Department Inspection Agency and has taught full-time electrical courses for Bucks County Technical School, as well as presentations at: US Steel Fairless Works, Penn State University, the IAEI, the Electric Education Center and The Electrical Association of Philadelphia.

ClimateMaster Residential Dealer Certification

Class

Geothermal - Residential

Certifications Included!



Day 1 Topics

- Residential Applications
- Residential Loop Technology
- Installation
- System Types
- Hands-on Socket Fusion Certification
- Design, and Software Training (*Including GeoDesigner and Pressure Drop/ Pump-Sizing Calculator*)

Day 2 Topics

- Residential Set-up, Installation
- Service, and Trouble Shooting Training
- Split System Training
- Flush/Purge Procedures
- Multiple Choice Tests

- Date:** Wednesday and Thursday, March 17, & 18, 2010
- Schedule:** 7:30 a.m. – Registration
8:00 a.m. – 5:00 p.m. (both days)
- Cost:** Member Rate - \$395
Non-Member Rate - \$640
- Location:** The EAP Offices
Plymouth Meeting, PA
(*Directions with confirmation*)
- Instructor's:** Bruce Snyder, Josh Wheale and Keith Trimmer

About the Instructor's

Bruce Snyder- IGSHPA Certified Installer, ClimateMaster Certified Trainer
Josh Wheale- IGSHPA Certified Installer, ClimateMaster Certified Trainer
Keith Trimmer- Applications Specialist, IGSHPA Certified Installer

Combined they have over 25 years of geothermal design, installation, and service experience with ClimateMaster, Florida Heatpump, and HydroDelta geothermal products.

Certification Option – Check box if you want a certification:

- 2 Day Certification Class *Residential Training Kit will be provided (\$125 value) – included!*

ROOT CAUSE ANALYSIS (RCA) TRAINING

PROGRAM

Undesired events happen in every organization! The extent of the consequences now, or whether undesired events happen again, is a product of how the organization responds. In order for organizations to improve they must be willing to recognize management system deficiencies and change those deficiencies within their control. Root Cause Analysis (RCA) encompasses a variety of problem solving methods aimed at identifying the root causes of problems or events, and identifying meaningful corrective actions. The practice of RCA is based on the understanding that problems are best solved by attempting to correct or eliminate root causes, as opposed to merely addressing the immediately obvious symptoms. By directing corrective measures at root causes, it is likely the problem of recurrence will be minimized and other related events eliminated. This course is designed for company owners, foremen, job supervisors and anyone interested in improving their organization and preventing undesired events from occurring.

Topics Covered

The following RCA topics will be presented and discussed:

- Defining the scope of the "problem".
- Gathering data and evidence.
- Identifying the appropriate RCA method(s) to apply
- Identifying the causal relationships associated with the defined problem.
- Identifying which causes, if removed or changed, will prevent recurrence.
- Identify effective corrective actions that will prevent recurrence, focusing on those within the organization's control and which meet established goals and objectives.
- Techniques of implementing corrective actions.

CEUs: 8 hours for Philadelphia
Date: Friday, April 9, 2010
Schedule: 7:00 a.m. – Registration - 7:30 a.m. – 4:00 p.m. Course
Cost: Member Rate - \$269
Non-Member Rate - \$394
Location: The EAP Offices
Plymouth Meeting, PA - *(Directions with confirmation)*
Instructor: Del Kubeldis

Required Text / Materials

– There are no required texts for this course.

About the Instructor

Mr. Kubeldis has more than 27 years of experience in the health and safety profession (including five years with PECO), and has conducted OSHA 10-hour and 30-hour training programs for hundreds of workers. He has managed health and safety programs for construction companies, contractors, manufacturers, wholesalers and utilities. Currently he provides construction safety and health services to large and small contractors throughout the region, focusing on OSHA compliance, accident prevention and risk management. Mr. Kubeldis will assist participants in identifying which OSHA standards apply to their company, help you to understand how to navigate through the standards, and introduce effective methods to comply with the standards.

SOLAR PHOTOVOLTAIC SYSTEMS

INSTALLATION & DESIGN

Solar Photovoltaic Systems Installation and Design. Certified Installer Course.

Learn the rules of the road on this exciting new addition to the electrical work in Pennsylvania. The States of New Jersey and Delaware are ahead of Pennsylvania on this one, but the stimulus money released by the Federal Government and the State of Pennsylvania is helping us to catch up. Solar PV 101 is a one week course designed to get you started in this industry. You have no doubt heard much about it. Your friends, neighbors and customers want answers, but you just don't know where to start. This course includes system design, installation methods, over current protection, DC circuits, Sunshine meter, and electric meter installation (PECO is different than the other utilities, for example). It also outlines current rebates, tax incentives and generation credits. We show you what the installer must do to make sure the customer qualifies for the incentives and stimulus money. All of this will all be covered in the one week program. Get the straight story from an expert Instructor and get educated at one of the leading facilities around, The Electric Association of Philadelphia. Note: This program is IREC/ISPA certified. Graduates will be able to apply for inclusion on the approved installers list for the State of PA and Delaware.

Date:	Monday, April 19 – Friday, April, 23, 2010 (1 Week Course)
Schedule:	8:30 a.m. – Registration – 9:00 a.m. – 5:00 p.m. Course
Note:	This program is IREC/ISPA certified. Graduates will be able to apply for inclusion on the approved installers list for the State of PA and Delaware
Cost:	Member Rate - \$2,350.00 Non-Member Rate - \$2,750.00 (Seminar Fee: Includes classroom materials, text book and lunch)
Location:	The EAP Offices Plymouth Meeting, PA - <i>(Directions with confirmation)</i>
Instructor:	Rich Van Wert (MSEIA member, IREC member, IREC/ISPQ certified)

Required Text / Materials

- Required text for this course will be distributed on the first day of class (included).

About the Instructor

Rich Van Wert is President of Benjamin Franklin Chapter of the International Association of Electrical Inspectors (IAEI), Senior Electrical Inspector for Middle Department Inspection Agency, Commonwealth of Pennsylvania UCC Inspector, City of Philadelphia Electrical Inspector and State of New Jersey Approved Instructor No. 359.

Rich has been employed in the Electrical Industry for more than 40 years. He is currently a Senior Electrical Inspector with Middle Department Inspection Agency and has taught full-time electrical courses for Bucks County Technical School, as well as presentations at: US Steel Fairless Works, Penn State University, the IAEI, the Electric Education Center and The Electrical Association of Philadelphia.

COMMERCIAL ELECTRIC WIRE SYSTEMS

There were many new rule changes in the NEC over the last two Code cycles. Are you on top of all of them? Tune up your Commercial Electric knowledge and keep yourself ahead of the pack by attending this class. Get your questions answered by an expert.

- Do I really need AFCI breakers in a commercial installation?
- Hear there are new GFCI rules. What are they?
- What is the latest on installing non-metallic sheathed cable (Romex) in commercial building? Is it even allowed?
- What are the new marking requirements for home runs and branch circuits?
- Why can't I continue to use black and white MC conductors to tie in my 277V lighting circuits?
- Is BX still used?
- Can you please straighten me out on whether or not I need GFCI protection for every receptacle in a commercial kitchen? What is the definition of a kitchen this Code cycle?
- Am I required to install only circuit breakers with handle ties when sharing a neutral? I thought that was a residential rule only.
- Can you explain the Tap Rule to me and is it true that I cannot use 500 kcmil conductors to feed a 400 A MCB panel on the load side of the transformer?
- I hear a lot about Solar Photovoltaic systems. Can you enlighten me?
- I am on my first commercial job and someone is trying to tell me that if I ground the service to building steel I don't have to drive a ground rod. Is this true?
- You are telling me that I need "nail plates" on metal studs?
- Roof top conductors in conduit have to be extra derated now? Where does it say that in the NEC?
- The Electrical Inspector is insisting that I install a fused disconnect and won't allow a circuit breaker in an enclosure to serve as a disconnect. Is he right?

Learn the rules and save yourself a lot of time and money. Come to this one day seminar on Commercial Electric. Place yourself and your company at the head of the pack. Let someone else make the expensive mistakes. The money you save by learning the rules. It will pay for the course fee many times over.

CEUs:	8 hours for Philadelphia, New Jersey and Delaware
Date:	Friday, May 21, 2010
Schedule:	7:30 a.m. – Registration – 8:00 a.m. – 4:30 p.m. Course
Cost:	Member Rate - \$269 Non-Member Rate - \$394
Location:	The EAP Offices Plymouth Meeting, PA - (<i>Directions with confirmation</i>)
Instructor:	Rich Van Wert

Required Text / Materials

- There are no required texts for this course.
- Bring your own copy of the 2008 NEC.

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The Electrical Association of Philadelphia
Spring 2010 Educational Opportunities
Registration Form

On - Line Registration is now available – www.eap.org

Name(s): _____

Company: _____

Address: _____

City, State, Zip: _____

Phone: _____ Fax: _____ Email: _____



Please check the seminar(s) you wish to attend:

<u>Seminar</u>	<u>DATE</u>	<u>EAP MEMBER FEE</u>	<u>NON-MEMBER FEE</u>
<input type="checkbox"/> Grounding & Bonding	January 29	\$269	\$394
<input type="checkbox"/> NEC Branch-Circuits	February 12	\$269	\$394
<input type="checkbox"/> Residential Electric Systems	February 19	\$269	\$394
<input type="checkbox"/> Geothermal - Residential	March 17 & 18	\$395	\$640
<input type="checkbox"/> Root Cause & Analysis	April 9	\$269	\$394
<input type="checkbox"/> Solar PV	April 19-23	\$2,350	\$2,750
<input type="checkbox"/> Commercial Electric Systems	May 21	\$269	\$394

Total from above: \$ _____

Check # _____ enclosed.

Credit Card # _____ o VISA o MasterCard o AmEx

Expiration Date: _____ CVV2 Code: _____

Name on Card: _____ Signature: _____

- Full course descriptions and on-line registration/payment may be found at www.eap.org.
- Make checks payable to: The Electrical Association of Philadelphia or "EAP". **Payment is required at time of registration to reserve your spot.**
- All courses are held at The EAP Offices. Directions will be sent with confirmations.

Please return this form and payment to The Electrical Association of Philadelphia

527 Plymouth Road, Suite 408
 Plymouth Meeting, PA 19462
 Fax – (610) 825-1603
 If you have any questions please call Lisa
 (610) 825-1600, ext. 14, or email lisa@eap.org

