2012

Renewable Energy Course Catalog

Metro Region - Member

The Omaha Joint Electrical Apprenticeship Training Committee (OJEATC) would like to thank you for your interest in our syNErgy training program.

syNErgy is funded through a US Department of Labor State Energy Sector Partnership (SESP) grant and is coordinated through the Nebraska Department of Labor. The OJEATC is an approved training provider.

The goal of syNErgy is to teach workers the skills required in obtaining and maintaining employment in the green construction and emerging industries, including energy efficiency and renewable energy markets.

This booklet is designed to inform you of the syNErgy approved training opportunities made available through the partnership between the Nebraska Department of Labor's syNErgy program, the International Brotherhood of Electrical Workers (IBEW) Local 22, the Nebraska Chapter, Omaha Division, of the National Electrical Contractors Association (NECA) and the OJEATC.

The classes are designed to benefit a wide range of participants based on skill attainment including:Low-income

- Low-skilled
- Unemployed
- Incumbent Workers
- Apprentices
- Journeymen

We look forward to your participation in the classes and the opportunities the trainings may afford to you in the future.

Please feel free to contact me if you should have any questions.

Sincerely,

Edwin Karnish
Training Director, OJEATC
Phone: (402) 331-3103 or Email: edk@electriciansjatc.org

Fundamentals of Instrumentation (EPRI LEVEL 1)

Instructor: Jim Stratman

May 30 June 4, 6, 11, 13, 18, 20, 25, 27 July 2, 9, 11, 16, 18, 23, 2012

5:00pm – 8:00pm

CEU's – 6 Hrs. code, 39 Hrs. other, NE only

This class begins with an introduction to the basics of instrumentation along with definitions of commonly used terms and symbols. An overview of the physical parameters of industrial measurement and control, pressure, flow, level and temperature is included. The workbook covers complex material such as; configuration and calibration including proper documentation. Both bench calibration of analog instruments and communication with digital or "smart" instruments are covered in great detail. It finishes with fundamentals of automated process control, control valves, control valve maintenance, analytical instrumentation, instrument installation and tubing.

EPRI Level 1 Certification

Once prequalified, one must sit for a written test. This open book, open note exam is comprised of 200 questions covering the various aspects of instrumentation, electrical and mechanical theory and instrument calibration. A 3½-hour time-period is allowed for completion of this exam.

Participants who complete this class will be provided the necessary curriculum to obtain the IBEW/UA Instrument Certifications.

Commercial Energy Auditing
Instructor: Don Gerjevic
June 4, 6, 11, 13, 18, 20, 25, 2012
5:00 – 8:00pm

CEU's – 6 Hrs. code, 15 Hrs. other, NE only

This class is designed to gain a basic understanding of energy conservation in commercial buildings with emphasis on lighting and lighting control. Describe energy best practices (avoiding unnecessary energy use, increasing efficiency of energy use, balancing electrical loads, seeking alternative energy sources) along with describing major challenges to the green environment that are caused directly or indirectly by the built environment.

If you have a laptop, please bring it! This class is very thorough!

Participants who complete this class will receive a certificate of completion based on skill attainment.

Electric Vehicle Infrastructure Training Program
Installer Certification
Instructor: Kevin Wetuski
June 4, 6, 11, 13, 18, 20, 25, 27, 2012
5:00 – 8:00pm

CEU's – 6 Hrs. code, 18 Hrs. other. IA & NE

Industry partners and stakeholders are contributing EVITP course content. Key training program elements include lecture and hands-on lab sessions (as appropriate):

- EV prospect/customer relations and customer experience
- Automobile manufacturer's charging performance integrity specifications
- EV battery types, specifications, and charging characteristics
- Utility interconnect policies and requirements
- Utility grid stress precautions including Demand Response integration technologies
- The role of electrical storage devices as charging intermediaries
- Installing, commissioning and maintaining electric storage devices
- Charging station fundamentals; brand/model specific installation instructions for:
    - Phase 1:
        - Level 1: 120 VAC 15-20 amps
        - Level 2: 120-240 VAC 60 amps
- Service level assessments and upgrade implementation
- Integration of EV infrastructure with distributed generation
- Understanding Internet Protocol (IP) networking of charging stations
- National Electrical Code (NEC) standards and requirements

Electric Vehicle Infrastructure Training Program
Installer Certification
Instructor: Kevin Wetuski
June 4, 6, 11, 13, 18, 20, 25, 27, 2012
5:00 – 8:00pm
(Continued)

- National Fire Protection Association (NFPA) 70E, and OSHA regulations
- National Electrical Installation Standards (NEIS) for EV Equipment
- First Responder safety and fire hazard measures

Participants who complete this class will receive a certificate of completion based on skill attainment. A national certification as an "EVITP Certified Installer" will also be awarded.

Significant Changes to the 2011 NEC
Instructor: Don Gerjevic
June 19, 21, 26, 28, July 3, 5, 2012
9am – 12pm

CEU's – 18 Hrs. code, IA & NE

This course will cover the most significant changes that occurred between the 2008 and 2011 editions of the NEC. Why the change occurred, as well as its significance to the electrical industry, with emphasis on the relatively new energy sources such as Solar and Wind. This course is essential for Code instructors, especially those covering the two Code change lessons in *Codes and Practices 4/5*. This course is also well suited for contractors, estimators, inspectors, electrical workers, and anyone who needs to stay abreast of the changes to the NEC. This course features the brand new NJATC *Significant Changes to the NEC - 2011 edition* Textbook.

Participants MUST bring a copy of the 2011 NEC to class.

Participants who complete this class will receive a certificate of completion based on skill attainment.

Residential Energy Auditing
Instructor: Jeff Elsasser
July 9, 11, 16, 18, 23, 25, 30, August 1, 6, 8, 2012
August 13 – Online Test
August 18 and 25 – Residential Field Audit
5:00 – 8:00pm

CEU's – 6 Hrs. code, 24 hours other NE only

This is a Building Performance Institute (BPI) certification class designed to instruct the methods and procedures of residential energy auditing. The Building Performance Institute, Inc. (BPI) is the nation's premier standards development and credentialing organization for residential energy efficiency retrofit work. They are helping build an industry, create a workforce, and support programs through professional certification, contractor accreditation, and quality assurance services. From these standards, they have developed professional credentials for individuals and accreditation for contracting companies. This field is expected to exponentially grow as the concern for needless energy waste becomes more and more apparent. BPI certified professionals are in demand now more than ever before, **in fact, many state-run energy efficiency and weatherization assistance programs demand BPI credentials**. BPI certified professionals have a key role to play in helping these programs expand.

Participants who complete this class will test and certify through BPI.

Solar Photovoltaic Systems Class
Instructor: Don Gerjevic
July 9, 10, 11, 2012
10:00am - 2:30pm

CEU's – 6 Hrs. code, 6 Hrs. other. IA & NE

This twelve-hour course will cover the basic theory of this emerging technology. This class will also cover the basics of the mechanical and electrical design considerations as well as the National Electrical Code considerations. The components covered in the course include the array, batteries, controllers, and inverters. The class will also briefly touch on other methods of distributed generation.

Participants who complete this class will receive a certificate of completion based on skill attainment.

2011 Code Calculations
Instructor: Don Gerjevic
July 16, 18, 23, 25, 30, August 1, 2012
9am – 12pm

CEU's – 18 Hrs. code, IA & NE

Code calculations are among the most challenging topics for both students and instructors. The object of this course is to gain a more complete understanding of the NEC by preparing and using detailed calculations in accordance with the 2011 National Electrical Code. Specific training methods used in presenting the NEC material will be stressed during the presentations. The course will showcase the 2011 NJATC Textbook and Instructors Guide for the NJATC Code Calculations Based on the 2011 NEC. A moderate to heavy level of review and preparation will be required to become familiar with the changes made to this important portion of the curriculum that spans several years of the Inside curriculum.

NOTE: Participants MUST bring a copy of the 2011 NEC to class.

Participants who complete this class will receive a certificate of completion based on skill attainment.

Urban Wind Class
Instructor: Kevin Wetuski
August 6, 8, 13, 15, 20, 22, 2012
5:00pm – 8:00pm

CEU's – 6 Hrs. code, 12 Hrs. other, NE only

This class is an orientation into wind energy with a focus on urban or 'small' wind power applications. Organized into eleven (11) modules, participants are exposed to wind power fundamentals, turbines and subsystems, site orientation, inter-connectivity, economics and safety. Instruction is reinforced by hands-on assembly and installation of a small wind turbine.

Participants who complete this class will receive a certificate of completion based on skill attainment.

The following classes may be scheduled in the future as the need arises:

Commercial Energy Auditing

Residential Energy Auditing

Solar Photovoltaic

Instrumentation

Wind Tower Training

Foreman Training

Welding Certification

EVITP

4/19/12