



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

Solar Photovoltaic Systems Class

Instructor: Foster Weyand

January 23, 24, 25, 2012

10:00 am - 2:30 pm

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.

Electric Vehicle Infrastructure Training Program
Installer Certification
Instructor: Kevin Wetuski
January 23, 25, 30 February 1, 6, 8, 13, 15, 2012
4:30 pm – 7:30 pm

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

January 23, 25, 30 February 1, 6, 8, 13, 15, 2012

4:30 pm – 7:30 pm

(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.

Foreman Training Class

Instructor: Don Gerjevic

January 23, 30 February 6, 13, 20, 27

March 5, 12, 19, 26 April 2, 9, 2012

4:30 pm - 7:30 pm

This class is designed to address the fundamentals of job site operations and to give individuals proper direction to attain successful project results. The experienced Foreman will also benefit from best practices that have been incorporated into the program. The modules employ an action-learning format and encourage a lively exchange of ideas between participants and the experiences shared will benefit the entire class.

The Foreman's Development Series provides a broad overview of practical hands-on fundamentals based on industry - best practices and do not represent any particular management style or point of view. The goal of this series is to provide additional tools for the Foreman that will compliment other training programs either from the contractor or from other industry partners.

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

Commercial Energy Auditing
Instructor: Foster Weyand
February 28 March 1, 6, 8, 13, 15, 20, 2012
4:30 pm –7:30 pm

This class is designed to gain a basic understanding of energy conservation in commercial buildings. 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.

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

Residential Energy Auditing

Instructor: Jeff Elsasser

February 13, 15, 20, 22, 27, 29 March 5, 7, 12

March 14 – Online Test

March 19, 21, 2012 – Residential Field Audit

4:30 pm - 7:30 pm

This class is designed to certify every participant with BPI to perform residential energy auditing. At the end of the class, an online test will be administered. Once the individual passes the online test, they will be brought out to a home and perform an onsite audit.

Participants who complete this class will receive a “Building Analyst” certification through the “Building Performance Institute” (BPI).

Solar Photovoltaic Systems Class

Instructor: Foster Weyand

February 20, 21, 22, 2012

10:00 am - 2:30 pm

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.

Solar Photovoltaic Systems Class

Instructor: Foster Weyand

March 19, 20, 21, 2012

10:00 am - 2:30 pm

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.

Wind Turbine Certification
Instructor: Kevin Wetuski
April 9, 11, 16, 18, 23, 25, 2012
4:30 pm - 7:30 pm

Module One: Competent Climber (12 hours)

Class is limited to 12 students. **Students must qualify to take this class by completing the tower climb at the start of class.** This will consist of climbing 3 times up and down under 8 minutes and 30 seconds with approximately 5lbs of weight added on the 2nd and 3rd climb. The climb is 48 feet to the upper deck. The student must complete lessons 1-10, and 17-20 in the orientation workbook before coming to class. The student will also be performing:

- Self-rescue, and team rescue on the climbing wall
- “Leap of Faith” with the automatic descender
- Tower exercise, climb out of ladder and work hands free
- Lift 180 pound dummy up to platform and lower it back down the ladder with a spotter

Module Two: Cable Prep (6 hours)

Class is limited to 12 students. Students will complete lessons 11-17 in the Wind Orientation workbook. Students will work on 5kv high voltage cable and prepare cables for a termination, splice, and a load break.

STUDENT MUST BRING BASIC HAND TOOLS

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

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

4:30 pm – 7:30 pm

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.

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, 11, 18, 25 July 9, 16, 23, 2012

4:30 pm – 7:30 pm

This class is designed to gain a basic understanding of energy conservation in commercial buildings. 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.

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