

# Northwest Washington Electrical Industry JATC, Summer/Fall 2010 Classes

**“\*” Classes Are Available for IBEW Members and Contractors Only**

**2008 NEC Code Update** 8 hours CEU, IAEI Analysis of Changes text \$37.99, 2008 NEC Code Book \$50.07. Required for all WA license renewals.

**Conduit Bending** 16 hours CEU, ***Required Reference Guide Text \$13.82***. Covers conduit bending procedures and methods, including layout and calculations, use of hand and power benders and advanced bending techniques.

**Data and Communication Cabling for Electricians** 8 hours CEU, no text. Designed for electricians with limited, or no, experience with data and communication cabling installation. Covers theory, materials and installation practices. Includes hands on cable termination exercises.

**Electrical Grounding** 8 hours CEU, Soares Book on Grounding and Bonding text \$43.74. Covers the fundamentals of grounding and bonding and the requirements of NEC Article 250.

**Fire Alarms** 16 hour class (12 hours CEU), ***Required Text \$48.34***. Covers basic definitions and system types, installation practices and fire alarm codes and standards. **No AK.**

**First Aid/CPR** 4 hours CEU (class takes about 6 hours), No text. Red Cross or American Heart Assoc. certification. **No AK.**

**\*Fundamentals of Instrumentation** The next Fundamentals of Instrumentation (Part A) class (80 hrs of class time) will be scheduled beginning in January, 2011. ***Contact JATC for an application form for this class.*** Part B (hands on) preparatory classes and exams are being held in Sep-Nov for those who completed the Part A class and passed the exam in Winter/Spring 2010. Both Part A and Part B exams must be passed for full EPRI instrumentation technician certification.

**Hazardous Locations** 4 hours CEU, No text. An overview of the requirements of NEC Articles 500-516.

**\*Introduction to Building Automation** 16 hour class (12 hours CEU), ***Required Text \$59.86***. Covers operation, signaling and functions of common sensors, actuators and other control devices used in building automation systems for commercial buildings. The market for these systems will be expanding with the push for energy conservation.

**\*Introduction to Photovoltaic Systems** 8 hours CEU. No required text. This introductory class is a prerequisite to other advanced PV classes. Covers the principles of photovoltaics, along with an overview of system advantages/disadvantages, installation practices and NEC requirements. Available Text \$64.28 (Used for advanced PV classes, also)

**\*Introduction to Programmable Logic Controllers (PLCs)** 16 hours CEU, No text. Covers the basics of programmable controller fundamentals and system installation, as well as the use of PC-based programming software. Requires familiarity with Microsoft Windows. A 4-hour evening class will be held prior to the PLC class for those who need MS Windows training, please advise the JATC if needed. This class is a prerequisite for Intermediate PLCs class planned for Spring 2011.

**Motor Control** 16 hours CEU, No text. Covers the fundamental concepts of motor control, including theory, diagrams and devices.

**NFPA 70E - Electrical Safety Related Work Practices** 8 hours CEU, no text, 2009 NFPA 70E \$42.00. Covers NFPA 70E and the requirements for recognition of, and protection from, hazards associated with working on or near energized circuits. Includes an overview of NFPA 70E - Standards for Electrical Safety in the Workplace, which are now being required to be followed by many industrial customers.

**\*Photovoltaic System Installation** **Prerequisite: Introduction to Photovoltaic Systems, *Required Text \$64.28***. 16 hour class (12 hours CEU), Covers component operation, installation practices and NEC requirements. Includes hands-on installation experience of working PV system.

**\*Photovoltaic System Design** **Prerequisite: Photovoltaic System Installation (uses same text)**. 16 hour class (OR CEU, **no WA or AK**). Covers site evaluation and survey, system design and sizing. Taking this series of 3 PV classes will prepare students to take the NABCEP PV Entry Level Certificate exam. (JATC is certified testing center)

**On Q – Residential Automation** 8 hour class (no CEU credit), no text. Covers application and installation of Legrand (parent company of Pass & Seymour) On Q home automation systems, with applications of energy management, sound, security, communications, video and lighting control for residential installation applications.

**OSHA 10 Safety Training** 8 hours CEU, No text. Construction safety training. Required to work at all oil refineries. **No AK.**

**RCW/WAC Update** 4 hours CEU, No text. Copies of RCW/WAC \$10.82. Required for all WA license renewals. **No AK, OR.**

**Transformers** 8 hours CEU, No text. Covers fundamentals of theory, types, connections and applications of various types of transformers.

**NOTE: BOOK PRICES INCLUDE 8.2% SALES TAX**