

# Northwest Washington Electrical Industry JATC, Winter/Spring 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.

**Branch Circuits, Feeders and Services** 4 hours CEU, no text. Overview of the requirements of NEC Articles 210 through 230, including conductor tap rules in Article 240.

**Conduit Bending** 16 hours CEU, ***Required Reference Guide Text \$12.66***. 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 \$42.59. Covers the fundamentals of grounding and bonding and the requirements of NEC Article 250.

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

**\*Fundamentals of Instrumentation Required Texts and Manuals \$119.67**. 80 hour class (16 hours CEU), Covers instrumentation terms and symbols, parameters of industrial measurement and automated process control, control valves and valve maintenance, instrument installation and configuration, calibration and documentation of instrument systems. Students will be expected to take the IBEW/UA EPRI Part A written exam upon completion of the course. Class dates: Feb 20,27; Mar 13,20,27; Apr 10,17,24; May 8,15. Tentative exam date: Jun 5. Part B (hands on) preparatory class and exams will be held in June for those passing the Part A exam. Both Part A and Part B exams must be passed for full EPRI instrumentation technician certification. ***Contact JATC for application form for this class.***

**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 \$58.71***. 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 \$63.31.

**\*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.

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

**NFPA 70E - Electrical Safety Related Work Practices** 8 hours CEU, ***Required Text \$48.34***. 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 is now being required to be followed by many industrial customers.

**\*Photovoltaic System Installation Prerequisite: Introduction to Photovoltaic Systems, Required Text \$63.31**. 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 (no CEU). 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 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 and Intalco.

**Overcurrent Protection** 8 hour class (2-4 hour evening sessions), no text, but 2008 NEC (available for \$50.07 and calculator must be brought to the class). Covers the application of NEC Article 240, along with theory, calculations and applications of overcurrent devices.

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

**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**