

COURSE DESCRIPTIONS

* The credit hours received, toward your NJ Electrical Contractor's license, are the same as the course hours. For other jurisdictions, (Delaware, Philadelphia & Cecil Co, MD) the credit hours you will receive appear next to the course titles below and they may be less. For PA & NJ Professional Engineers, hours credit are indicated for each course below.

(See registration sheet for course numbers, dates & locations)

(10 HRS) "The 2011 NATIONAL ELECTRICAL CODE UPDATE" - Credit hrs: NJ-10, CC-5, PH-0, DE-9, NJ & PA PEs-10**
THIS COURSE IS MANDATED BY THE STATE, FOR NJ ELECT CONT AND MUST BE A PART OF YOUR 34 HOUR REQUIREMENT. It will cover the changes to the new Code. A Code change book will be provided by TES and is included in the cost. **COST \$265**

**Philadelphia still uses the 2008 NEC and will not accept any "2011 NEC Update" courses for Philadelphia credit

(8 HRS) RESIDENTIAL WIRING FOR ONE AND TWO FAMILY DWELLINGS - Credit hrs: NJ-8, CC-5, PH-8, DE-8. NJ & PA PEs-8

This course will cover 1 and 2 family dwellings. Residential wiring is undoubtedly the most common and abundant type of electrical installation, in the world. Safe electrical installations are as important in residential occupancies as in any other occupancy. The student will learn Code make-up, changes, how to interpret rules and exceptions and how to properly install feeders. **COST \$175**

(8 HRS) SOLAR PHOTOVOLTAIC SYSTEMS - Credit hrs: NJ-8, CC-5, PH-8, DE-8, NJ & PA PEs-8

This course provides a general knowledge about the installation of photovoltaic systems. These systems are beginning to make significant inroads into both the residential and commercial markets. It stands to reason that this work should be performed by an electrical contractor. He will be responsible for installation of these systems in accordance with Article 690 of The NEC and the provisions of the latest adopted codes and standards. **COST \$175**

(8 HRS) GROUNDING AND BONDING I - Credit hrs: NJ-8, CC-5, PH-8, DE-8. NJ & PA PEs-8

This course will study Grounding and Bonding which are the most important parts of an electrical installation. Understanding the differences between Grounding and Bonding will help the students properly apply the Code rules to installations and systems. Grounding and Bonding are common to nearly every article in The National Electrical Code. **COST \$175**

(8 HRS) ELECTRICAL ESTIMATING - Credit hrs: NJ-8, CC-0, PH-0, DE-8, NJ & PA PEs-8

This course gives a comprehensive presentation on understanding and preparation of electrical estimates. The tools for estimating, both commercial and residential jobs, will be covered in detail along with "hands on" class participation. **COST \$175**

(8 HRS) CODE CALCULATIONS 1 - Credit hrs: NJ-8, CC-5, PH-8, DE-8, NJ & PA PEs-8

This course will show the student the need to be able to determine and calculate, service loads for several types of occupancies. They will learn how to calculate the minimum number of branch circuits with feeder continuous and non-continuous loads for all wiring systems in The National Electrical Code. Topics covered will include Articles 220, 230 and 250. **COST \$175**

(8 HRS) MOTORS & CONTROLS (Article 430) - Credit hrs: NJ-8, CC-5, PH-8, DE-8, NJ & PA PEs-8

This course will cover motors, motor branch circuits, feeder conductors and their protection, motor overload protection, motor controllers and control centers. The National Electric Code Handbook Presentation will be the course material with a 160 computer generated power point slide presentation. The contents of Article 430 and Parts will be covered. **COST \$175**

(8 HRS) TRANSFORMERS (Article 450) - Credit hrs: NJ-8, CC-5, PH-8, DE-8, NJ & PA PEs-8

This course is designed to establish the basic requirements for safe and reliable transformer installations. It will discuss KVA ratings, overcurrent protection and proper transformer grounding. A power point presentation and worksheet calculations will be used. **COST \$175**

(8 HRS) FIRE ALARM REQUIREMENTS & TELECOMMUNICATIONS - Credit hrs: NJ-8, CC-5, PH-8, DE-8, NJ & PA PEs-8

Given in two (4) hr. segments, but as one 8 hour course. The first segment is designed to provide the necessary background required to install and troubleshoot a fire alarm system. The course will describe the proper terminology used in the field. The topics covered are NFPA 70, Article 760 and NFPA 72. The second segment, Telecommunications, is designed to do a comprehensive study on the requirements for structured cabling systems. TIA/EIA standards will be reviewed. **COST \$175**

(8 HRS) NEW JERSEY UNIFORM CONSTRUCTION CODE FOR ELECTRICIANS Credit hrs: NJ-8, CC-0, PH-0, DE-0, NJ & PA PEs-8

This seminar provides 8 hours of instruction covering aspects of the UCC (Blue Book) as it pertains to electrical contractors. It puts particular emphasis on the Rehabilitation Code. The UCC provides the bylaws which govern electricians and inspectors. Topics covered will include, what work requires permits, applying for a variation, appeals, NJ modifications to the NEC Rehabilitation Code and other codes for which electricians are responsible such as, IBC, Energy Sub-Code and ICC/ANSI. **COST \$175**

(8 HRS) BUILDING & MANAGING YOUR ELECTRICAL CONTRACTING BUSINESS TO SURVIVE THE RECESSION - Credit hrs: NJ-8, CC-0, PH-0, DE-0, NJ & PA PEs-0

Given in two (4) hr. segments, but as one 8 hr. course. The first segment will teach electrical contractors how to market their services to prospective customers. The curriculum will train contractors on how to separate themselves from their competition, secure repeat business and gain referrals from previous customers. The second segment will concentrate on delegating, celebrating your achievements, increasing productivity, controlling the telephone and getting a handle on paper work, without adding hours to your day. Leave here knowing how to control your business and not have your business control your life. **COST \$175**

(16 HRS) OSHA SAFETY TRAINING - Credit hrs: NJ-16, CC-0, PH 16, DE-5, NJ & PA PEs-16

Given in two (8) hr. segments - you must take both. Upon completion, you will be issued a 10 Hour OSHA certificate.

This course will cover in depth safety training for electrical construction. The course will cover electrical safety, fall protection, material handling, personal protective equipment, confined spaces, fire protection and prevention and much more. The cost of accidents and the business side of safety will also be discussed. **COST \$350** for both sessions.

(8 HRS) TROUBLESHOOTING ELECTRICAL CIRCUITS & CONTROLS - Credit hrs: NJ-8, CC-5, PH-8, DE-8, NJ & PA PEs-8

Often when electrical installations fail to perform as intended, either due to installation oversights or component failures, the frustration associated with troubleshooting and repairs may be greater than they need to be. By applying some basic knowledge and fundamental troubleshooting techniques, the effort can be more productive. This course is designed to give a basic understanding of the tools and techniques for troubleshooting typical electrical circuits. **COST \$175**

(8 HRS) INTRODUCTION TO INDUSTRIAL PROCESS AUTOMATION - Credit hrs: NJ-8, CC-5, PH-0, DE-8, NJ & PA PEs-8

Introduction automation systems are a key part of the operations in every pharmaceutical, chemical and petroleum facilities. A major part of the installation and maintenance of these systems involves the electrical trade. This course is designed to give a broad understanding of the technology, terms, equipment and electrical wiring methods that is a key part of every safe and reliable installation. **COST \$175**

(8 HRS) GENERATORS - Credit hrs: NJ-8, CC-5, PH-8, DE-8, NJ & PA PEs-8

The course will begin with the history of generation and will touch on some of the more notable generator pioneers and installations in the country. Review theory of operation and construction of generators, applications, sizing, NFPA 70 and 110 Codes concerning generators, review types of transfer switches and applications, prime movers, battery theory, construction of batteries, battery chargers and their safe application, fuel systems, including principle of operation of gas regulators, piping systems, general installation methods and practices, such as rigging, concrete pads, sound attenuation, exhaust and ventilation. Servicing generators will also be covered. **COST \$175**

(8 HRS) HOW TO USE THE NEC WORKSHOP AND SWIMMING POOLS (Article 680) - Credit hrs: NJ-8, CC-5, PH-8, DE-8, NJ & PA PEs-8

Given in two (4) hr. segments, but as one 8 hr. course. The first segment will cover the use of the NEC Book. The Code Book is a valuable tool, but could also be an interesting book. Learn how the Code Book is assembled, where items are located and what applies to the articles. The second segment will introduce the student to Article 680. The primary focus will be on the construction and installation of electrical wiring and equipment, in or adjacent to pools, fountains, hot tubs, spas and hydro-massage bathtubs, whether permanently installed or storable and to metallic auxiliary equipment, such as pumps, filters and similar items. **COST \$175**

(8 HRS) ELECTRIC SERVICES (Art. 230) & USES & PROPERTIES OF CONDUCTORS - Credit hrs: NJ-8, CC-5, PH-8, DE-8, NJ & PA PEs-8

Given in two (4) hr. segments, but as one 8 hour course. The first segment covers the requirements set forth in NEC Article 230 to promote better understanding & increase code compliance. The second segment will cover selection of conductors, ampacity, termination & more. **COST \$175**

(8 HRS) HEALTH CARE FACILITIES (ARTICLE 517) AND HAZARDOUS LOCATIONS - Credit hrs: NJ-8, CC-5, PH-8, DE-8, NJ & PA PEs-8

Given in two (4) hr. segments, but as one 8 hour course. The first segment covers the requirements for electrical installations in health care facilities. It is primarily based on the provisions set forth in the 2008 National Electrical Code. This presentation has been developed to promote greater understanding and to increase electrical safety for electrical systems in health care facilities. Items covered will be Article 517 and Covering Parts. The second segment will introduce the student to Chapter 5 of The National Electrical Code "Special Occupancies". The main focus will be on primary installations of Hazardous Locations 1, 2 and 3. **COST \$175**

THE CREDIT HOURS YOU WILL RECEIVE FOR EACH COURSE, FOR THE JURISDICTIONS IN WHICH YOU ARE REGISTERED, ARE SHOWN ABOVE, AFTER EACH COURSE TITLE.

NJ = NEW JERSEY

CC = CECIL COUNTY, MD

PH = PHILA

DE = DELAWARE

NJ & PA PEs = NJ & PA PROFESSIONAL ENGINEERS