

COURSE DESCRIPTIONS

* The course hours = credit hours received toward your NJ Electrical Contractor's license. Credit hours received for other jurisdictions often vary. See the credit hours listed beside each course title.

(See registration sheet page of this website for course numbers, dates & locations)

(10 HRS) "The 2017 NATIONAL ELECTRICAL CODE UPDATE" - Credit hrs: NJ-10, DE-9, CC-5, PH-0, NJ & PA PEs-10 THIS COURSE IS MANDATED BY THE STATE, FOR NJ ELECT CONTRACTORS AND MUST BE A PART OF YOUR 34 HOUR REQUIREMENT. It will cover the changes to the new Code. A 2017 Code change book will be provided by TES and is included in the cost. COST \$315

****Philadelphia has not yet adopted the 2017 NEC and will not accept any "2017 NEC Update" courses for Philadelphia credit**

(8 HRS) RESIDENTIAL WIRING FOR ONE AND TWO FAMILY DWELLINGS - Credit hrs: NJ-8, DE-8, CC-5, PH-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 \$200

(8 HRS) SOLAR PHOTOVOLTAIC SYSTEMS - Credit hrs: NJ-8, CC-5, DE-8, PH-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. 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 \$200

(8 HRS) GROUNDING AND BONDING I - Credit hrs: NJ-8, CC-5, DE-8, PH-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 \$200

(8 HRS) ELECTRICAL ESTIMATING - Credit hrs: NJ-8, CC-0, DE-8, PH-0, 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 \$200

(8 HRS) MOTORS & CONTROLS (Article 430) - Credit hrs: NJ-8, CC-5, DE-8, PH-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 \$200

(8 HRS) TRANSFORMERS (Article 450) - Credit hrs: NJ-8, CC-5, DE-8, PH-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 \$200

(8 HRS) FIRE ALARM REQUIREMENTS & TELECOMMUNICATIONS -Credit hrs: NJ-8, CC-5, DE-8, PH-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 \$200

(8 HRS) NEW JERSEY UNIFORM CONSTRUCTION CODE FOR ELECTRICIANS Credit hrs: NJ-8, DE-0, CC-0, PH-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 \$200

(16 HRS) OSHA SAFETY TRAINING - Credit hrs: NJ-16, DE-16, PH-16, CC-0, NJ & PA PEs-16 Given in two (8) hr. segments - you must take both to get any credit. Upon completion, you will receive 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 \$400 for both sessions.

(30 HRS) OSHA SAFETY TRAINING - Credit hrs: NJ-30 (credit in NJ is given only if you complete all 4 sessions), CC-0, DE- 30, PH 30, NJ & PA PEs – Check with your NJ or PA PE Board > Given in 4 (7 1/2) hr. segments – Must take all (4) sessions to receive any credits.

You will then receive a 30 Hour OSHA certificate. > Today, the demand for contractors to present documentation of OSHA 30 hr. training with their bids is greatly increasing. The expectation is that contractors have supervisors on site that are trained in the OSHA 30 hr and have the documentation to prove that training. In these classes, the subject matter will be slanted toward the electrical contractor to identify hazards associated with the subpart and how that may impact them. In today's construction market, the Electrical contractors need to protect themselves with every tool they have at their disposal. This OSHA 30 hr class is a method to assist them in this effort. COST \$660 for all (4) sessions.

(8 HRS) SWIMMING POOLS (Article 680) & HEALTH CARE FACILITIES (Article 517) Credit hrs: NJ-8, CC-5, DE-8, PH-8, NJ & PA

PEs-8. Given in two (4) hr. segments, but as one 8 hour course. The first 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. The second half covers the requirements for electrical installations in health care facilities. It is primarily based on the provisions set forth in the 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. COST \$200

(8 HRS) OVERCURRENT PROTECTIVE DEVICES & USES & PROPERTIES OF CONDUCTORS - Credit hrs: NJ-8, CC-5, DE-8, PH-8,

NJ & PA PEs-8. Given in two (4) hr. segments, but as one 8 hour course. The first segment covers the types of overcurrents and how specific devices protect the electrical system. The course begins with the three basic types of overcurrents and device ratings. The discussion continues with the selection overcurrent protective devices for services, feeders and branch circuits. Available short circuit calculations, selective coordination and series rated systems will be covered in detail. The second segment will cover selection of conductors, ampacity, termination & more. COST \$200

(8 HRS) MOST COMMON REASONS FOR FAILING INSPECTIONS & PLAN REVIEW- Credit hrs: NJ-8, CC-0, DE-8, PH-8, NJ & PA PEs-8. Covers over 100 of the most common reasons electrical contractors fail to receive

approvals for their permit applications and inspections. The topics were gathered from electricians, inspectors, architects and engineers. The sources they reference are from the NEC, Uniform Construction Code, Barrier Free Code, International Energy Conservation Code, International Residential Code, International Building Code and the NFPA 72, The National Fire Alarm Code. This course will aid the electrical contractor in successfully completing the permit application and inspection processes. COST \$200

(8 HRS) BUSINESS STRATEGIES, PRACTICES AND TECHNIQUES- Credit hrs: NJ-8, CC-0, DE-0, PH-0, NJ & PA PEs-0

This class is designed for the electrical contractor who is looking to take his business to the next level. You will learn to manage your time more efficiently, keep the schedule full, improve your communication skills (with both employees and customers) and when, where and how to network to grow your customer base. Basic business practices will be discussed along with leadership skills and “branding” your company. Come to this class with an open mind and the willingness to learn new ideas. COST \$200

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

Introducing a brand new course that incorporates Programmable Logic Controllers (PLCs) and Variable Frequency Drives (VFDs). This course is designed to equip the novice, with no prior PLC programming experience, with the basic tools necessary to create a complete PLC program using ladder logic common to most current platforms. It takes a basic look at what a PLC is and how it works. Learn about installation and troubleshooting techniques. It incorporates PLCs with VFDs which includes basic concepts of how a VFD works along with interfacing with a PLC. COST \$200

(8 HRS) RESIDENTIAL GENERATOR INSTALLATIONS - Credit hrs: NJ-8, CC-5, DE-8, PH-8, NJ & PA PEs-8.

This course will cover the requirements for generator installations in one and two family dwellings. We begin by discussing the various codes involved and the permit process. The discussion continues with generator selection and proper sizing for service and feeder conductors. Grounding and selective coordination is covered in detail. COST \$200

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