



ELECTRICAL TRAINING INSTITUTE

For
NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION L.A. COUNTY CHAPTER
And
INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL UNION NO. 11



JOURNEYMAN CLASS DESCRIPTIONS

ADVANCED LIGHTING CONTROL – This class is truly the next frontier in “Green Energy Solutions” and is a must for all electricians who want to participate in this future boom. This class will train you to correctly select, design, and install energy-efficient and cost-effective commercial, residential and industrial lighting systems. Successful completion of this class will earn you the certification **required** to work on these projects in the future.

ASBESTOS SAFETY AWARENESS – Required for all electricians who may disturb small amounts of asbestos in the course of their work. Provides training in recognizing asbestos, required regulations concerning possible contact, potential health effects, personal protection and methods of abatement. Successful completion of this class earns a one-year certificate. NOTE: This course does **not** qualify or certify for asbestos abatement work.

ASBESTOS SAFETY AWARENESS RENEWAL – This class provides for the renewal of the one-year certificate for asbestos safety awareness, but only if completed **prior** to the expiration of a valid certification. Pre-requisite: Valid Asbestos Safety Awareness Certification

BLUE PRINT READING – This course is based on the NJATC Curriculum for residential, commercial and industrial plan reading. Familiarization with the full set of drawings and application to the electrical installation is covered including symbols, details and specifications. This course is valuable for all electricians at all experience levels.

CABLE PULLING – This course instructs the proper cable pulling techniques using state-of-the art equipment. Both hand and power pulling methods are covered.

COMPUTERS A – An introductory course for the new or novice computer user covering the very basics of operating and navigating the many capabilities of a personal computer. The basics of Microsoft Office Word and Excel are introduced.

COMPUTERS B – This course continues exploring the many functions offered by a personal computer. A more in-depth study of Microsoft Office Word and Excel are offered. Pre-requisite: Computers A

CONDUIT BENDING A – This lab/lecture course will cover hands-on experience with E.M.T. and rigid types of conduit, safe-use of hand benders, mathematics and layout requirements for proper bending procedures for conduits of ½” through 1 ½”.

CONDUIT BENDING B – Included in this lab/lecture class are the hands-on experience and layout fundamentals for 1 ½” through 4” rigid, IMC and EMT conduit with the use of electric and hydraulic bending equipment. Pre-requisite: Conduit Bending A



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ELECTRICAL VEHICLE INFRASTRUCTURE TRAINING PROGRAM: (EVITP) - This 24 hour class addresses the requirements, regulations, products, and strategies which will enable contractors and electricians to master successful, expert, and professional customer relations, installation, and maintenance of Electric Vehicle (EV) and Plug-In Hybrid Electric Vehicle (PHEV) infrastructure. Graduates will gain thorough knowledge and practical application of all covered EV Infrastructure subjects, and this certification is recommended by vehicle manufacturers to perform these EV and PHEV installations.

FIBER OPTICS – This course covers optical fiber technology including the proper preparation, installation procedures, splicing and termination of fiber. Metering and troubleshooting techniques are also covered in this very hands-on skill improvement lab.

FIELD ESTIMATING – Introductory course prepared to assist people now engaged in field supervision, or who plan to be in the future. Students will learn the very basics to estimate and price electrical changes and additions to the original scope of work, including preparing takeoffs, using and adjusting labor units, material pricing and computer estimating. Submittal and shop drawing analysis, change orders, back charges, affects of overtime on productivity, and affects of scheduling are also covered.

FIRE ALARM "A" – This course covers the theory of Fire Alarm circuits concentrating on power-limited, non-power-limited and supervisory circuits with an emphasis on Article 760 of the NEC.

FIRE ALARM "B" – The last course in this series instructs on the hands-on skills of properly connecting all fire alarm devices, fire alarm panels and annunciators. Also introduces the student to programming addressable fire alarm equipment. Pre-requisite: Fire Alarm "A"

FIRST AID, CPR AND AED – This class offers Medec Certification which is valid for two (2) years and offers invaluable life-saving skills useful for not only our working partners, but our friends and family as well.

FIRST AID, CPR AND AED RENEWAL – Offers a two (2) year renewal of the nationally-recognized Medic Certifications. Pre-requisite: Valid Medec First Aid, CPR and AED Certification.

FOREMANSHIP – This class is for those individuals who are now in supervision or plan to be. Topics cover safety, contracts, scheduling, estimating, stewardship, harassment, dispatch procedures and leadership skills.

GROUNDING – Covering both theory and techniques of proper grounding of main services, transformers and branch circuits. Article 250 of the NEC is thoroughly examined.



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HIGH VOLTAGE CABLE SPLICING – This very extensive comprehensive 44-week course educates the Journey-level worker on high-voltage theory, but concentrates on the hands-on skill of properly splicing, and terminating all of the different types of 5 and 15kv cables, insulations and shieldings. The wide assortment of termination and splice kits currently available are taught including heat shrink, cold shrink, gel and molded products. The entire process is covered from proper cable preparation to testing, fault locating and test instrument trouble-shooting. Successful completion of this course prepares the journeyman for the National Cable Splicing Board Certification, and an Executive Board request for an upgrade of your IBEW classification.

KNOTS & RIGGING – Learn the proper tying and application of many useful knots. Additionally, learn the proper rigging methods to safely lift, move and set electrical equipment.

LEAD SAFETY AWARENESS – Required for all electricians who may disturb small amounts of lead in the course of their work. Provides training in recognizing lead, required regulations concerning possible contact, potential health effects, personal protection and methods of abatement. Successful completion of this class will earn a one-year certificate. Note: This class does not qualify or certify for lead abatement work.

LEAD SAFETY AWARENESS RENEWAL – This class provides for the renewal of the one-year certificate for lead safety awareness, but only if completed prior to the expiration of a valid certificate. Pre-requisite: Lead Safety Awareness Certificate

LICENSING PREPARATION – These classes are intended for the California General Electrician, Residential, Fire/Life Safety and VDV Certifications. Instructors cover the 2002 NEC Code, Ohms Law, and basic principles required for certification. Practice tests are emphasized. The student must provide their own 2002 National Electrical Code Book for these courses.

MOTOR CONTROL A – This course provides both theory and hands-on training on the basics of Motor Control including ladder diagrams, control components, motor starters, pilot lights and over-current protection.

MOTOR CONTROL B – This course continues more complex and in-depth training in Motor Control applications with an emphasis on trouble-shooting techniques. Pre-requisite: Motor Control A

MOTOR CONTROL C – The last in the series of motor control training includes an intensive emphasis on industrial applications. Pre-requisite: Motor Control A & B

NEC 2005 – Learn the very effective and proper use of the National Electrical Code book with numerous methods and short-cuts. All articles of the 2005 NEC are covered with an emphasis on the codes which frequently apply to our installations.

NFPA 70E – This is a “must-take” course for all members of our trade. This course studies the dangers of working with energized circuits and the proper methods of protection with an emphasis on the Proper Personal Equipment (PPE) required by OSHA.



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OSHA 30 – The curriculum structure mandated by Fed OSHA is closely followed in the aspects of construction safety. Successful completion earns a lifetime OSHA 30 Certificate. Pre-requisite: Successful completion of the QSP Certification within the previous 6 months.

PHOTO-VOLTAIC INSTALLATION & DESIGN – This very comprehensive class teaching the very latest in the new “Green Technology” of Solar Power Production with a very intensive emphasis on hands-on skill training. Areas thoroughly covered include site evaluation, system sizing, roof mounting methods, system installation, inverter wiring, operation, testing, monitoring, metering and trouble shooting.

PHOTO-VOLTAIC CERTIFICATION TESTING – A review and test covering photo-voltaic installation and design. Successful passing of this exam earns Statewide Certification to allow working on these solar power generating systems. Pre-requisite: Photo-Voltaic Installation & Design.

PROCESS INSTRUMENTATION “A” – A theory course designed to thoroughly instruct calibration methods and techniques. Knowledge in flow, temperature, pressure and level monitoring is covered as well as a close look at the operation and fundamentals of process switches, indicators, transmitters and recorders. Successful completion of this course and a passing grade of the EPRI Level 1 exam will earn the EPRI Level 1 Certification.

PROCESS INSTRUMENTATION “B” – This course emphasizes the lab work necessary to learn calibration wiring and testing necessary for a variety of process systems, and insure a safe start-up procedure. Troubleshooting techniques and maintenance knowledge are incorporated into this very hands-on class. Completion of this course prepares the student to take the EPRI Level 2 exam, and when satisfactorily completed will receive the full EPRI Certification which qualifies the holder to accept Instrumentation Technician requests from the Dispatch office. Pre-requisite: EPRI Level 1 Certification.

QUALIFIED SAFETY PERSON (QSP) – This class emphasizes safety training for the electrical trade. Successful completion of this class earns the Local #11 QSP card and the OSHA 10 Certification.

QUALIFIED SAFETY PERSON (QSP) RENEWAL – This safety class provides for the renewal of the Local #11 QSP card. Pre-requisite: Valid Local #11 QSP card.

SECURITY SURVEILLANCE – This hands-on lab covers the installation, use, and maintenance of visual (camera) security systems. Testing and troubleshooting of these systems are also included.

TELEPHONE INTERCONNECT – Learn the proper methods to lay-out, terminate and interconnect to a telephone service provider. This hands-on lab emphasizes terminal station, multi-pair distribution and PBX station wiring using M-66 and 110 blocks and individual RJ-11 jacks. Proper color-coding and backboard lay-out methods are also included.



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TRANSFORMERS – This course provides the student with a comprehensive knowledge of transformer types and their various applications. Interpretation of sizing, theory of operation, proper handling and installation, calculations for feeders and over current protection for both the primary and secondary sides are emphasized. NEC Article 450 is thoroughly reviewed along with those sections of Article 250 which apply.

TRANSPORTATION SKILL IMPROVEMENT – This course covers the very basics of the installation methods and requirements of the intelligent transportation systems industry. This class is designed for those who desire an introduction to this skilled industry, or to those who want to refresh their existing skills.