

Accredited Electrical Program

RAYS ELECTRICAL SERVICE, LLC

Rays Electrical Service, LLC, has been in the Electrical business since 2008 and has proven teaching and mentoring strategies in the Electrical Trades. In 2019, the company became a Sponsor and Administrator of the NCCER Standardized Curricula that provides registered credentials to individuals who have successfully completed the required training program within a craft.

Some features of the NCCER Standardized Curricula are as follows:



- An industry-proven record of success
- Curricula developed by the industry, for the industry
- National standardization providing portability of learned job skills an educational credit
- Compliance with the Office of Apprenticeship requirements for related classroom training (CFR 29:29)
- Well-illustrated, up-to-date, and practical information

BENEFITS OF ACCREDITED CLASSROOM TRAINING PROGRAM

Rays Electrical Service is an Accredited Training Sponsor and Administrator of the NCCER and utilizes its standardized training and credentialing program for the industry. A typical ACTP course encompasses 144 hours of classroom and laboratory training annually. To successfully complete the **Electrical Program requires completing the NCCER Core Curriculum plus Electrical Levels 1 - 4.** Trainees receive transferable credentials issued by NCCER including transcripts, certificates and an initial wallet card that are tracked through the NCCER Registry System upon each level completion.

CLASS ENROLLMENT

Our classes are offered as an independent education as well as fulfilling the required classroom hours for a registered apprenticeship program. The enrollment in our classes is not a guarantee of employment or apprenticeship.

EQUAL EDUCATION OPPORTUNITY POLICY

Rays Electrical Service is committed to providing equal education opportunities regardless of sex, race, color, religion, age, national origin, or disability and complies with all federal and state laws.

COURSE CANCELLATION – Rays Electrical Service reserves the right to cancel in-person courses and provide an alternative remote method for classroom teaching. Lab or Hands-on training will need to be rescheduled as it must be performed in person at a later date.

COURSE ATTENDANCE POLICY

Attendance and punctuality are vital to the success of any training and is a requirement for the course. Attendance records are monitored and by each instructor and accessible by the office. Apprentices/craft trainees are responsible for planning in advance with an instructor to make up any absences at the instructor's designated time/date of their availability. Students and their employers will be notified within ten days of an absent occurrence. Please note excessive tardiness or missing class (more than 2 per curriculum term) may result in dismissal from program and/or your employment.

REQUIREMENTS - STUDENT REGISTRATION for NCCER CLASSES

To register for an Apprenticeship/Craft Training Program (ACTP), applicants must be 16 years of age, perform 10-grade level math, and signature of acceptance of the student handbook. Please complete the Student Registration form & send by e-mail (lisa@rayselectrical.com) or personally delivered to Lisa at the office of Rays Electrical Service located at 37W904 US Hwy 20, Elgin IL. 60124.

ELECTRICAL LEVEL 1 CLASSES- 2020/2021 (This is the First year of a 4-year program)

*Level 1 Electrical includes the NCCER Core Curriculum: Introductory Craft Skills. The tuition of \$3600 covers NCCER books for Core Curriculum and ELECTRICAL LEVEL 1 with on-line access to NCCER Connect & classroom teaching with required hands on labs.

Students will provide their own basic hand tools, basic safety PPE and need to purchase lab materials (ex. conduit, and fittings) throughout the course.

Please contact Lisa for more information at 847-214-2944.

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CORE Curriculum:

Title	Related Instruction Descriptions	Approx. Hours:
Basic Safety	Presents basic jobsite safety information to prepare workers for the construction environment. Describes the common causes of workplace incidents and accidents and how to avoid them. Introduces common PPE, including equipment required for work at height, and its proper use. Information related to safety in several specific environments, including welding areas and confined spaces, is also provided.	12.5
Introduction to Construction Math	Reviews basic math skills related to the construction trades and demonstrates how they apply to the trades. Covers multiple systems of measurement, decimals, fractions, and basic geometry	10
Introduction to Hand Tools	Introduces common hand tools used in a variety of construction crafts. Identifies tools and how to safely use them. Proper hand tool maintenance is also presented.	10
Introduction to Power Tools	Identifies and describes the operation of many power tools common in the construction environment. Provides instruction on proper use, as well as on safe-handling guidelines and basic maintenance.	10
Introduction to Construction Drawings	Introduces the basic elements of construction drawings. The common components of drawings are presented, as well as the most common drawing types. The use of drawing scales and how to measure drawings is also covered.	10
Introduction to Basic Rigging	Provides basic information related to rigging and rigging hardware, such as slings, rigging hitches, and hoists. Emphasizes safe working habits in the vicinity of rigging operations.	7.5
Basic Communication Skills	Provides good techniques for effective communication on the job. Includes examples that emphasize the importance of both written and verbal communication skills. Describes the importance of reading skills in the construction industry and covers proper techniques to use in a variety of different written communication formats.	7.5
Basic Employability Skills	Describes the opportunities offered by the construction trades. Discusses critical thinking and essential problem-solving skills for the construction industry. Also identifies and discusses positive social skills and their value in the workplace.	7.5
Introduction to Material Handling	Describes the hazards associated with handling materials and provides techniques to avoid both injury and property damage. Common material-handling equipment is also introduced.	10
	Total Core Curriculum Hours:	72.5

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Electrical 1:

Title	Related Instruction Descriptions	Approx. Hours:
Orientation to the Electrical Trade	Provides an overview of the electrical trade and discusses the career paths available to electricians.	2.5
Electrical Safety	Covers safety rules and regulations for electricians, including precautions for electrical hazards found on the job. Also covers the OSHA-mandated lockout/tagout procedure.	10
Introduction to Electrical Circuits	Introduces electrical concepts used in Ohm's law applied to DC series circuits. Covers atomic theory, electromotive force, resistance, and electric power equations.	7.5
Electrical Theory	Introduces series, parallel, and series parallel circuits. Covers resistive circuits, Kirchhoff's voltage and current laws, and circuit analysis.	7.5
Introduction to the National Electrical Code®	Provides a road map for using the NEC®. Introduces the layout and the types of information found within the code book. Allows trainees to practice finding information using an easy-to-follow procedure.	7.5
Device Boxes	Covers the hardware and systems used by an electrician to mount and support boxes, receptacles, and other electrical components. Also covers NEC® fill and pull requirements for device, pull, and junction boxes under 100 cubic inches.	10
Hand Bending	Introduces conduit bending and installation. Covers the techniques for using hand-operated and step conduit benders, as well as cutting, reaming, and threading conduit.	10
Raceways and Fittings	Introduces the types and applications of raceways, wireways, and ducts. Stresses the applicable NEC® requirements.	20
Conductors and Cables	Focuses on the types and applications of conductors and covers proper wiring techniques. Stresses the applicable NEC® requirements.	10
Basic Electrical Construction Drawings	Describes electrical prints, drawings, and symbols, and the types of information that can be found on schematics, one-lines, and wiring diagrams.	7.5
Residential Electrical Services	Covers the electrical devices and wiring techniques common to residential construction and maintenance. Allows trainees to practice making service calculations. Stresses the applicable NEC® requirements.	15
Electrical Test Equipment	Covers proper selection, inspection, and use of common electrical test equipment, including voltage testers, clamp-on ammeters, ohmmeters, multimeters, phase/motor rotation testers, and data recording equipment. Also covers safety precautions and meter category ratings.	5
	Total Electrical 1 Curriculum Hours:	107.5