

Continuing Education Training Class Schedule



4675 Viewridge Avenue
San Diego, CA 92123-1644

Summer 2024 Semester
Vol. 2024 - 2 tri-annual

The classes listed in this schedule are designed for I.B.E.W. Local 569 members who wish to further their education. If you are interested in attending Continuing Education Training (CET) classes at the Electrical Training Institute, please read through this schedule and follow the simple registration instructions.

To register for classes:

- 1) **Online** – from the homepage, click on the ATS Student Login button. You need to have an account to login.
- 2) **By telephone: San Diego classes:** (858) 569-6633, select option 3 then 2. **Imperial County classes:** (760) 355-3000.
- 3) New to online registration? Email us at info@sdett.org

To download the class schedule, visit www.etiedu.org/continuing_education. **Bookstore hours:** 3:30-4:30pm Monday through Friday.

LEARN WHEN AND WHERE YOU WANT

Our self-pace online course options are designed for flexibility, so you can plan your study time to fit your schedule.

Lighting Control Association (<https://aboutlightingcontrols.org/EducationExpress/>)

The Lighting Controls Association is proud to offer free, comprehensive online education about lighting controls technology and application. Courses are registered and are recognized as preparation for CALCTP (California Advanced Lighting Control Training Program). Upon completion of the course(s), print and send your course completion certificate(s) to ETI for continuing educational hours to info@sdett.org.

ELECTRIC VEHICLE CHARGING SYSTEMS, based on 2017 NEC (EVCS-17)

This computer-based course is self-paced and can be purchased during business hours at any ETI location. The participant is expected to sign up for one of the exam dates once they have completed the online course material and have received their completion certificate from the *electrical training ALLIANCE* (etA). Course material must be purchased and completed prior to the exam date. EVCS certifications will only be issued to CA state-certified general electricians with a passing score on the final exam and submission of a completion certificate from the online course material. Eighteen (18) continuing education hours will be awarded upon course completion.

NOTE: This course serves as an instructional primer for the Electric Vehicle Infrastructure Training Program (EVITP) Certification Exam. The course provides an introduction to electric vehicle charging products and associated equipment on the market today. Electrical Workers completing this training go to work with the ability to implement best practices in areas such as charging station equipment, infrastructure site assessment, load calculation, installation, commissioning, and troubleshooting.

Exam Date	Day	Exam Time	Room	Location	Instructor
06/03/2024	Mon	5-8:30pm	102	San Diego	Collier
06/25/2024	Tue	5-8:30pm	102	San Diego	Collier
07/12/2024	Fri	5-8:30pm	102	San Diego	Collier
07/19/2024	Fri	4:30-8pm	1	Imperial*	Gonzales
07/31/2024	Wed	4:30-8pm	102	San Diego	Collier
08/12/2024	Mon	5-8:30pm	102	San Diego	Collier

08/13/2024	Tue	5-8:30pm	102	San Diego	Collier
08/16/2024	Fri	4:30-8pm	102	San Diego	Collier
08/16/2024	Fri	4:30-8pm	1	Imperial*	Gonzales

* Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

BLUEBEAM

Launch your document reading, editing, and creating skills into the future with this overview of the Bluebeam software and all that it can do when it comes to digital documentation. Students will learn the basic functionality of the software while getting into the vast assortment of mark up and editing tools. A specific focus will be given to construction-related tools and features.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Tue	06/18	07/23	6	5-8:30pm	112	San Diego	Pendergraft

BOOM LIFT & SCISSOR LIFT TRAINING

This course covers aerial boom and scissor lift hazards, including uneven surfaces, walk around inspection, falls, electric shock, equipment collapse, inclement weather, nearby work, inexperience or improper operation, mechanical defects, and inadvertent operation. Course content also includes hands-on training, applicable regulations, training requirements and key safety practices, as well as the responsibilities of owners, supervisors, and operators. Any worker who is involved in the use and operation of aerial lifts needs this training in order to safely perform aerial lift related tasks. These motorized work platforms are used in a variety of industries, from construction to factory work to shipyards. Proper training includes understanding the regulations and requirements laid out by OSHA, which are covered in this course. *Apprenticeship makeup opportunity: must schedule with Ken Collier prior to attendance.*

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Sat	07/20	07/20	1	8am-12pm	201	San Diego	Smart Safety

CALCTP (California Advanced Lighting Control Training Program) TECHNICAL

PRE-REQUISITE: The prerequisite studies are on the Lighting Controls Association website - modules EE101, EE102, EE103, and EE201 and valid state certification card. Pre-requisites must be submitted a week prior to the start of class. These courses can be found at http://aboutlightingcontrols.org/Education_Express/welcome.php. For enrollment in CALCTP, applicants must present the certificates of completion for online study and a copy of their state certification card to the Electrical Training Institute prior to enrollment in the CALCTP course. This course is divided into modules consisting of both lecture and lab activities. The module content is organized to answer the following questions about lighting controls: what they are, what they do, where they are used, and how they are installed. Each lecture contains one or more interactive components, including group discussions, device demonstrations and/or calculation exercises. The corresponding lab period, following the lecture, allows the attendee to directly apply what has been learned by installing the devices on specially designed lab boards, under the supervision of the CALCTP-certified instructor(s). The course consists of the online prerequisites, lecture and a final exam. Successful completion of this course is a pre-requisite to enroll in the CALCTP Acceptance Technician certification course.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Sat**	06/22	08/15	8	5-8:30pm	2	Imperial*	Perkins
Mon/Wed	06/26	08/15	15	5-8:30pm	101/211	San Diego	Berger/Perkins

* Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

**No meeting Sat. 07/06 (Make-up class on Thu. 8/15).

CODE CALCULATIONS: BOX FILL

This course covers Article 314 of the NEC (National Electric Code) which covers the installation and use of all boxes and conduit bodies, used as outlet, device, junction, or pull boxes. Special emphasis will be put on box fill and box volume calculations. All participants will become familiar with Table 314.16(A) for metal boxes and Table 314.16(B) Volume Allowance Required per Conductor. Students will be taught how to calculate the available space or volume for a given box when there are devices and/or equipment installed or planned to be installed in that box.

Apprenticeship makeup opportunity: must schedule with Ken Collier prior to attendance.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	05/31	05/31	1	4:30-8pm	Via Zoom	SD, Imp	Maushardt
Sat	07/27	07/27	1	8-11:30am	1	Imperial*	Lopez

* Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

CODE CALCULATIONS: CONDUCTOR AMPACITY

This course covers Section 310.15 of the NEC (National Electric Code) which covers Ampacities for Conductors Rated 0-2000 volts. All participants will become familiar with Table 310.13 for Conductor Application and Insulation, 310.15(B)(2)(a) Adjustment Factors for More Than 3 Current Carrying Conductors in a Raceway, Table 310.15(B)(6) Conductor Types and Sizes for 120/240, 3-wire, Single Phase Dwelling Services and Feeders.

Apprenticeship makeup opportunity: must schedule with Ken Collier prior to attendance.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	06/21	06/21	1	4:30-8pm	Via Zoom	SD, Imp	Maushardt
Sat	08/03	08/03	1	12-3:30pm	1	Imperial*	Lopez

* Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

CODE CALCULATIONS: RACEWAY FILL

The NEC Code Calculations: Raceway Fill course covers basic procedures on how to select the proper size raceway based on insulation type, size and number of conductors installed in a raceway. *Apprenticeship makeup opportunity: must schedule with Ken Collier prior to attendance.*

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	07/12	07/12	1	4:30-8pm	Via Zoom	SD, Imp	Maushardt
Sat	07/27	07/27	1	12-3:30pm	1	Imperial*	Lopez

* Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

CODE CALCULATIONS: VOLTAGE DROP

This course introduces the student to equations used to calculate resistance and voltage drop based on Table 8, Chapter 9 of the NEC (National Electrical Code). All participants will become familiar with Table 8 of Chapter 9, Conductor Properties and Table 310.16 Allowable Ampacities of Insulated Conductors Rated 0 through 2000 Volts. Students will be taught how to calculate the resistance of a given wire size using the resistance equations based on the code book values of Table 8, Chapter 9 and how to use that resistance value to calculate the voltage drop for an electrical circuit. *Apprenticeship makeup opportunity: must schedule with Ken Collier prior to attendance.*

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	07/26	07/26	1	4:30-8pm	Via Zoom	SD, Imp	Maushardt
Sat	08/03	08/03	1	8-11:30am	1	Imperial*	Lopez

* Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

CONDUIT BENDING

This course is designed to teach students how to use the different types of benders (Hand Benders, Electric Benders, Hydraulic Benders) and how they work. Students will also be introduced to the different conduit bending tables, trig formulas and how they apply to the different types of benders and given demonstrations on the different procedures in using them. Further, the student will learn the code pertaining to the projects and will learn how to make presentable bends.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	02/02	03/29	8	4:30-8pm	Shop-1	Imperial*	Ceja
Tue	06/18	08/06	8	5-8:30pm	204	San Diego	Fehrs

*Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

CONFINED SPACE ENTRY HAZARD AWARENESS

This course teaches workers about the most common hazards found in confined spaces, and about the OSHA standards (29 CFR Part 1926 for construction & 29 CFR Part 1910 for the general industry) that address these hazards. The course also teaches the worker how to use the NIOSH (National Institute for Occupational Safety and Health) Pocket Guide to Chemical Hazards which contains key information and data for 677 chemicals or substances commonly found in the work environment. Participants have learned about safe entry procedures, monitoring principles; entry permits procedures, proper ventilation methods, personal protective equipment, and the roles of the entrant, attendant, and entry supervisor. *Apprenticeship makeup opportunity: must schedule with Ken Collier prior to attendance.*

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	08/09	08/09	1	4:30-8pm	Via Zoom	SD, Imp	Helms

COPPER STRUCTURED CABLING SYSTEMS

This course takes students through the history, terminology, terminations, and installation practices of Coper Structured Cabling Systems. This course will include lecture content and multiple hands-on termination labs.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Wed	06/12	07/31	8	5-8:30pm	112	San Diego	Finneran

CPR, AED AND FIRST AID FOR ADULTS

Certification in CPR, AED and First Aid – card is good for two years. Participants learn to recognize several life-threatening emergencies, provide CPR, use of AED, and relieve choking.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
FRI	05/03	05/03	1	4:30-8:30pm	1	Imperial*	Berry
TUE	05/14	05/14	1	4:30-8:30pm	203	San Diego	Maisano
THU	05/23	05/23	1	4:30-8:30pm	203	San Diego	Williams
TUE	05/28	05/28	1	4:30-8:30pm	203	San Diego	Williams
FRI	05/31	05/31	1	4:30-8:30pm	203	San Diego	Williams
MON	06/03	06/03	1	4:30-8:30pm	203	San Diego	Williams
FRI	06/07	06/07	1	4:30-8:30pm	1	Imperial*	Gonzales
WED	06/12	06/12	1	4:30-8:30pm	203	San Diego	Williams
FRI	06/21	06/21	1	4:30-8:30pm	203	San Diego	Maisano
WED	06/26	06/26	1	4:30-8:30pm	203	San Diego	Maisano
TUE	07/02	07/02	1	4:30-8:30pm	203	San Diego	Maisano
WED	07/10	07/10	1	4:30-8:30pm	203	San Diego	Maisano
FRI	07/12	07/12	1	4:30-8:30pm	1	Imperial*	Gonzales
MON	07/15	07/15	1	4:30-8:30pm	203	San Diego	Maisano
FRI	07/19	07/19	1	4:30-8:30pm	203	San Diego	Maisano
THU	07/25	07/25	1	4:30-8:30pm	203	San Diego	Maisano
MON	07/29	07/29	1	4:30-8:30pm	203	San Diego	Maisano
THU	08/01	08/01	1	4:30-8:30pm	203	San Diego	Maisano
WED	08/07	08/07	1	4:30-8:30pm	203	San Diego	Maisano
FRI	08/09	08/09	1	4:30-8:30pm	1	Imperial*	Gonzales
TUE	08/13	08/13	1	4:30-8:30pm	203	San Diego	Maisano
FRI	08/16	08/16	1	4:30-8:30pm	203	San Diego	Maisano

* Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

CYBERSECURITY FOR ELECTRICIANS

The course teaches apprentices and electricians the fundamentals of networking and cybersecurity, specifically, as it relates to their work as an electrical installer. Participants learn the basic principles of cybersecurity and how to apply them to their personal devices, as well as the building system components they will install. The Cybersecurity for Electricians course consists of four (4) lecture modules and four (4) hands-on exercises. Participants also learn how to identify and evaluate the cybersecurity risks associated with different networked Operational Technology, Information Technology, and Physical Access Control system components. The course covers various methods for configuring networked devices, as well as common network testing tools that can be used to evaluate network configuration and security. Finally, participants in the program learn how to implement fundamental cybersecurity hardening measures on both the end point devices and networking devices. Participants who successfully complete the Cybersecurity for Electricians course will receive the Cyber-electrical Training Certification.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Mon/Wed	07/29	08/12	5	5-8:30pm	204	San Diego	TBD

ENERGY STORAGE AND MICROGRID TRAINING AND CERTIFICATION (ESAMTAC)

Energy Storage and Microgrids is an instructor-led face-to-face course that will introduce several methods of storing electrical energy for use at a later time. The main focus of the course is to introduce safe work practices when installing battery storage systems using lead acid and lithium-ion battery chemistries. This instructor-led course will also prepare the student to take the Energy Storage and Microgrid Training and Certification (ESAMTAC) Registered Installer Exam. The Registered Installer Exam is hosted as a separate course exam within the LMS that will be taken upon completion of the Energy Storage and Microgrids course and hands-on labs.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Thu**	05/30	08/08	10	5-8:30pm	211	San Diego	Ancona

**No meeting Thu. 07/04.

FIBER OPTIC CABLING SYSTEM

This course takes students through the history, terminology, terminations, and installation practices of Fiber Optic Systems. This course will include lecture content and multiple hands-on termination labs.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Mon	06/03	07/22	8	5-8:30pm	211	San Diego	Greutmann

FIRE/LIFE SAFETY & VOICE-DATA-VIDEO CERTIFICATION PREP

This course is designed to teach the student code navigation skills and test taking strategies to help prepare them for taking the California Voice-Data-Video (VDV) & Fire/Life Safety (FLS) state certification exams.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Tue	06/04	08/06	10	5-8:30pm	Via Zoom	SD, Imp	Suttie

INTRODUCTION TO FIRE ALARM SYSTEMS

An introductory course taking students through the history of Fire Alarm Systems, basic terminations for NAC and SLC circuits, with some reference to basic troubleshooting. This course will include lecture content and hands-on labs.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Tue/Thu***	07/02	08/06	10	5-8:30pm	111	San Diego	Bressette

***No meeting Thu. 07/04.

INTRODUCTION TO MOTOR CONTROLS

This course will re-introduce the student to the basics of electricity; describe the control, operation and uses of each control component, its voltage rating, current and frequency rating. Topics also include rotating machine theory, ladder logic, electromechanical devices, solid-state relays, conventional and solid-state timers, three-phase power systems, and related topics involving industrial applications using basic A.C. and D.C. motors, and basic variable voltage and variable frequency drive wiring and operation.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Sat	06/01	06/22	7	8-11:30am	Lab	Imperial*	Lopez
Mon	06/10	07/29	8	5-8:30pm	205	San Diego	Saucedo

* Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

MEDIUM VOLTAGE SPLICING

PRE-REQUISITE: Open to only 5th Year apprentices and Journeymen. There will be class material fees associated with taking this class. Before understanding how to splice or terminate a cable, the worker must first understand each of the six layers of a medium voltage cable. Sometimes a medium voltage cable is considered to have five layers by a specifier. Module-1 covers hand-taped splices and terminations. This course presents information on several types of cable splices, and different specifications are examined. Different cable types, tools used in splicing, different insulation types, and the various types of insulation shields are covered. The importance of proper cable preparation is explained in detail. This module reviews many theory areas that will benefit all those doing medium voltage work and those preparing to take the National Cable Splicing Certification Board (NCSCB) written examination.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Thu**	06/27	08/08	7	5-8:30pm	101	San Diego	Morrison

**No meeting Thu. 07/04.

MENTORSHIP MATTERS – APPRENTICE MENTEE WORKSHOP

This workshop introduces participants to the six skills that Apprentices can apply immediately on the job with measurable results. The goal of the six modules is to help participants develop a positive mentoring relationship with their mentor, practice strategies for effective communication to maximize learning opportunities and provide goal setting techniques to increase success.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Mon/Wed	07/15	07/17	2	5-8:30pm	TBD	San Diego	TBD

MENTORSHIP MATTERS – MENTOR WORKSHOP

This workshop introduces participants to six steps that Mentors can apply immediately on the job with measurable results. The goal of the six modules is to help participants develop a positive mentoring relationship with their apprentices, use strategies for effectively communicating knowledge and skills to apprentices, demonstrating new skills, and giving feedback.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Mon/Wed	07/15	07/17	2	5-8:30pm	TBD	San Diego	TBD

NFPA-70E, ARC FLASH HAZARD AWARENESS

This is a comprehensive training session that covers OSHA Standard CFR 1910.331 - 1910-335. This NFPA 70E Electrical Arc Flash Hazard Awareness course will provide the student with the necessary knowledge to make sound decisions and institute safe work practices. Students will learn safe work practices and procedures and as a result, be able to recognize dangerous situations and avoid certain hazards before an incident occurs. They will also learn the safe approach distances to exposed electrical conductors. At the end of this training session, they will be able to determine the proper Personal Protective Equipment (PPE) for most situations or working condition encountered. Every student will leave this class with a much better understanding of the hazards they encounter every day and a newfound respect for electricity.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	08/02	08/09	2	5-8:30pm	110	San Diego	Eagles
Fri	08/09	08/16	2	5-8:30p	1	Imperial*	Berry

* Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

OSHA 10 CONSTRUCTION SAFETY

The **OSHA 10-hour Construction Industry Outreach** program is intended to provide entry-level construction workers with general awareness on recognizing and preventing hazards on a construction site. This course is designed for construction workers as an ideal orientation for those who are new to the industry and as a reminder to those who have been working in the industry to the hazards associated with their work. The program provides complete information on OSHA compliance issues. OSHA recommends Outreach Training Programs as an orientation to occupational safety and health for workers covered by **OSHA 29 CFR 1926**. Construction workers must receive additional training, when required by OSHA standards, on specific hazards of the job. The OSHA 10 Hour Construction Industry Outreach Training course includes a comprehensive test to ensure understanding of the OSHA safety requirements and regulations.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Sat	06/01	06/08	2	5-8:30pm	Via Zoom	SD, Imp	Silva
Tue	06/04	06/25	4	5-8:30pm	Via Zoom	SD, Imp	Silva
Wed	07/10	07/31	4	5-8:30pm	Via Zoom	SD, Imp	Silva
Sat	07/27	08/10	2	5-8:30pm	Via Zoom	SD, Imp	Silva

OSHA 30/EM-385 CONSTRUCTION HAZARD AWARENESS

The curriculum structure mandated by Fed OSHA is closely followed in the aspects of construction safety. This Cal/OSHA course reviews standards, procedures and policies for construction workers in California. The course also covers GHS Classification and Labeling of Chemicals, general safety awareness, required procedures, content and structure of the USACE Engineering Manual "EM-385-1-1-2008" Safety requirements and the 29 CFR Park 1926 Federal OSHA's Safety and Health Requirements for Construction. To order your free copy: Email hector.n.hunt@usace.army.mil and request a FREE copy of the EM-385-1-1 Army Corp of Engineers Safety Manual. Provide your name and mailing address. **Allow 5-7 business days for shipping.** Students are required to order the free textbook and have it available for class.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Tue/Thu	06/27	08/16	14	5-8:30pm	Via Zoom	SD, Imp	Mills

***No meeting Thu. 07/04. Meeting rescheduled for Friday, 08/16.

PATHWAY TO ELECTRICAL CERTIFICATION: CODE CALCULATIONS

This part 4 of 5 course series is designed to help the learner prepare for the California State Electrician's Exam. This course focuses on comprehensive training for solving *Code*-related mathematical issues. This course covers lessons related to determining conductor ampacity, finalizing ampacity calculations, performing box size and fill calculations, calculating raceway fill, introduction to electrical load calculations, range and appliance calculations, calculating the parameters of multifamily dwelling loads in accordance with the *NEC*, and calculating the parameters of commercial loads in accordance with the *NEC*. After completing this series of courses, the learner should be well prepared to take the California State Electrician's Exam.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Mon/Wed	07/10	07/29	6	5-8:30pm	210	San Diego	Monahan

PATHWAY TO ELECTRICAL CERTIFICATION: CODEOLOGY (PLAN, BUILD, USE) BASED ON 2017 NEC

This part 2 of 5 course series is designed to help the learner prepare for the California State Electrician's Exam. This course will help the learner to use and apply an efficient method to categorize and locate requirements in the *National Electrical Code (NEC)*. Through repetition and thorough understanding of the "Build" - "Plan" - "Use" concepts, the learner will gain confidence in using the 2017 *NEC*. After completing this series of courses, the learner should be well prepared to take the California State Electrician's Exam.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Mon/Wed	06/05	06/17	4	5-8:30pm	210	San Diego	Monahan

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PATHWAY TO ELECTRICAL CERTIFICATION: ELECTRICAL REVIEW

This part 1 of 5 course series is designed to help the learner prepare for the California State Electrician's Exam. The course will cover **Cal-OSHA, Safety in Construction** - Will provide entry-level construction safety and awareness information on recognizing and preventing hazards on a construction site. **Basic AC and DC Theory** - Simple series and parallel circuits covered in basic AC and DC current circuit analysis using basic trig and Ohm's Law. The students will demonstrate their new skills by working together to find the unknown voltage, current, resistance and power in a given circuit. **NFPA 70E** - Electrical safe work practices and how to prevent harm from the release of electrical energy. The student will learn safety practices that can be used to minimize and prevent exposure to electrical hazards. **Blueprint Reading, Symbols & Diagrams** - In order to facilitate the making and reading of electrical drawings, certain standard symbols are used. To read electrical drawings, it is necessary to know the meaning of the symbols and to have knowledge of how the equipment operates. **Math for Electricians** - Mathematics used in the electrical and construction trades include topics such as arithmetic, fractions, decimals, percentages, measurements, and an introduction to algebra and trigonometry. This subject will present basic algebra and trigonometry and their application to the solution of practical problems in the electrical construction field with an emphasis on trigonometric solutions to alternating current electrical theory. After completing this series of courses, the learner should be well prepared to take the California State Electrician's Exam.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Mon/Wed**	05/20	06/03	4	5-8:30pm	210	San Diego	Monahan
Fri	06/01	06/28	4	5-8:30pm	1	Imperial*	Berry

* Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

**No meeting Mon. 05/27.

PATHWAY TO ELECTRICAL CERTIFICATION: GROUNDING, ARTICLE 250 BASED ON 2017 NEC

This part 3 of 5 course series is designed to help the learner prepare for the California State Electrician's Exam. This Grounding and Bonding course introduces the student to the basic concepts of grounding, circuit basics, and overcurrent protection. The course then goes on to explain grounding electrodes, equipment grounding conductors, and grounding electrical equipment. Finally, the course explains the requirements for grounding at separate buildings or structures and grounding and bonding communications systems and equipment. During this period of instructions, the student will learn how grounding is used to improve power quality, save lives and prevent damage to plants, buildings and electrical equipment. After completing this series of courses, the learner should be well prepared to take the California State Electrician's Exam.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	03/08	04/19	6	5-8:30pm	2	Imperial*	Berry
Mon/Wed	06/19	07/08	6	5-8:30pm	210	San Diego	Monahan

*Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

PATHWAY TO ELECTRICAL CERTIFICATION: JOURNEYMAN ELECTRICIAN'S EXAM PREP BASED ON 2017 NEC

This part 5 of 5 course series is designed to help the learner prepare for the California State Electrician's Exam. This course is designed to help applicants prepare for the journeyman electrician's state or local electrical licensing examinations. This course, in conjunction with the workbook, offers an exam overview, the requirements involved, and preparation strategies. The course is organized in lessons that provide randomized questions from banks, which facilitate efficient exam preparation. These question banks include more than 800 review and sample licensing exam questions and problems based on *NEC*-related definitions, calculations, and factors associated with specific residential, commercial, or industrial applications along with questions based on general trade knowledge and electrical theory. Complete the course with at least minimum scores to attain a completion certificate, or access randomized quizzes for quick test prep if needed. After completing this series of courses, the learner should be well prepared to take the California State Electrician's Exam.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Mon/Wed	07/31	08/19	6	5-8:30pm	210	San Diego	Monahan

PRACTICING LEADERSHIP: FOREMAN DEVELOPMENT SERIES I thru V

The Foreman Development Series is designed to provide a broad overview of practical, hands-on fundamentals. If you work in the industry long enough, you will find that most Foremen run into the same problems from job to job and come up with similar solutions. These classes are based on current industry "Best Practices"; not any particular management style or IBEW or NECA point of view. The goal of this series is to provide additional tools for the Foreman to use that will compliment both their own skills as an electrician and their company's policies. Things a student learns in these classes will have practical applications the very next day on the jobsite.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Wed	06/05	07/24	8	5-8:30pm	205	San Diego	Saucedo

RIGGING FOR THE ELECTRICAL INDUSTRY

This course is designed to teach the physical principles, safety considerations, and common practices involved in rigging and hoisting loads. You will learn about different types and materials of slings, rigging hardware, fiber ropes, and knots. In addition to the materials used for rigging a load, you will also learn the basics of hoisting safety, hand signals, how to calculate load weight and balance, and proper storage of rigging materials. **This course is applicable to both the inside and outside industry.**

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Thu***	06/13	08/01	7	5-8:30pm	210	San Diego	Fehrs

***No meeting Thu. 07/04.

SMART BUILDING ENERGY MANAGEMENT STRATEGIES (SBEMS)

The course teaches apprentices and electricians the fundamentals of energy management as it relates to their work as an electrical installer in smart buildings. The participants learn the different energy management strategies that are being used today to ensure the stability of the electric grid and reduce total energy demand in commercial buildings. Participants learn about the code-mandated energy management strategy — Demand Response. The participants learn about the installation and commissioning process of modern building automation systems as a method for implementing energy management strategies. The course covers integrating building automation systems using multiple protocols, such as BACnet, web-based APIs, and OpenADR. Students are exposed to the concepts of programming a building automation system to implement energy management strategies in any installation. Students who successfully complete the Smart Building Energy Management Strategies course will receive the Cyber-electrical Training Certification.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Tue/Thu	08/06	08/20	5	5-8:30pm	204	San Diego	TBD

TUTORING FOR CA GENERAL ELECTRICIAN STATE CERTIFICATION EXAM

All those attending will need a copy of the 2020 NEC, a generic calculator, pen/pencil and a notepad to write on. The school (ETI) will provide the computer, a copy of the 2018 NFPA70E Standards for Electrical Safety manual and a CalOSHA Construction Safety Handbook. These tutoring sessions are designed to assist journeyman electricians and senior apprentice electricians in preparing to take the California State Electrical Certification Exam.

For each session, the instructor will cover material from the General Electrician Topic/Subtopic Category list posted on the Cal.gov website. A few of these topics are listed below.

Electrical Theory (AC & DC)
 Safety in Construction (Cal OSHA)
 Blueprint Symbols and Diagrams
 Codeology (Plan, Build, Use)
 Sizing Boxes, Conduit, Conductors and Services
 Code Calculations (Feeder and Branch Circuit Sizing)
 Grounding and Bonding
 NEC Chapter 5 (Special Locations, Special Equipment & Special Conditions)
 Chapter 9 (Tables and Annexes)

All participants will be trained in proper test taking techniques to decrease the amount of time needed to take the state exam. This will also help to decrease test anxieties. Towards the end of each tutoring session, participants will be given a timed practice test to build confidence in test taking. These tests will be taken on a computer to simulate the actual state certification exam. *Apprenticeship makeup opportunity: must schedule with Ken Collier prior to attendance.*

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	05/31	05/31	1	4:30-8pm	211	San Diego	Standefer
Fri	06/21	06/21	1	4:30-8pm	211	San Diego	Standefer
Fri	07/12	07/12	1	4:30-8pm	211	San Diego	Standefer
Fri	07/26	07/26	1	4:30-8pm	211	San Diego	Standefer
Fri	08/02	08/02	1	4:30-8pm	211	San Diego	Standefer
Fri	08/16	08/16	1	4:30-8pm	211	San Diego	Standefer

TUTORING FOR CA VDV-FLS STATE CERTIFICATION EXAMS

All those attending will need a copy of the 2020 NEC, a generic calculator, pen/pencil and a notepad to write on, and a copy of the NFPA 72 if they are pursuing the FLS exam. The school (ETI) will have a computer available if needed. These tutoring sessions are designed to assist journeyman sound technicians and senior apprentice technicians in preparing to take the California State VDV or FLS Certification Exams. All participants will be trained in proper test taking techniques to decrease the amount of time needed to take the state exam. This will also help to decrease test anxieties. During each tutoring session, participants will have the opportunity to take a timed practice test to build confidence in test taking. These tests will be taken on a computer to simulate the actual state certification exam. *Apprenticeship makeup opportunity: must schedule with Ken Collier prior to attendance.*

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	05/31	05/31	1	4:30-8pm	204	San Diego	Finneran
Fri	06/21	06/21	1	4:30-8pm	204	San Diego	Finneran
Fri	07/12	07/12	1	4:30-8pm	204	San Diego	Finneran
Fri	07/26	07/26	1	4:30-8pm	204	San Diego	Finneran
Fri	08/02	08/02	1	4:30-8pm	204	San Diego	Finneran
Fri	08/16	08/16	1	4:30-8pm	204	San Diego	Finneran

YOUR 401K Annuity Plan

A representative from John Hancock Retirement Plan services will be conducting an education meeting to give you an overview of the Plan, help you make the most of planning for your retirement, and give you a brief overview of the Plan website and tools available to you. Open to all members.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	07/19	07/19	1	4:30-7pm	Via Zoom	SD, Imp	Hancock Retirement Plan

YOUR HEALTH & WELFARE & PENSION PLANS

The San Diego Electrical Health & Welfare Trust and Pension Trust will provide a presentation on Plan Benefits relating to your current healthcare coverage and pension plan. Presentation will include highlights outlining some of the benefits, rules and regulations, Plan provisions, cost-containment programs and relevant information specific to your Plan.

Day(s)	Start	End	Sessions	Time	Room	Location	Instructor
Fri	07/12	07/12	1	4:30-7pm	201	San Diego	Morfoot

NOTICE

Name of Plan: San Diego Electrical Training Trust
Plan EIN: 95-3072483
Plan Administrator: Kevin Johnson

Any employee of any employer contributing to the Apprenticeship and Training Plan may be eligible to enroll in any course or program of study sponsored or established by the Plan.

Any interested individuals can obtain:

- A description of any existing or anticipated future course of study sponsored or established by the Plan
- Information concerning prerequisites for enrolling in such course.
- A description of the procedure by which to enroll in such course
- A copy of this notice

By contacting: San Diego Electrical Training Trust, 4675 Viewridge Avenue, San Diego, CA 92123

CLASS SCHEDULE BY DATE

Starting Date	Ending Date	Class ID	Description
05/03/2024	05/03/2024	2024J261801	CPR, AED And First Aid For Adults
05/10/2024	05/10/2024	2024MU0510	Apprentice Makeup Class
05/10/2024	05/10/2024	2024MU0510ETIMP	Electrician Trainee Makeup Class
05/10/2024	05/10/2024	2024MU0510IMP	Apprentice Makeup Imp Cty
05/14/2024	05/14/2024	2024J261802	CPR, AED And First Aid For Adults
05/17/2024	05/17/2024	2024MU0517	Apprentice Makeup Class
05/17/2024	05/17/2024	2024MU0517ETIMP	Electrician Trainee Makeup Class
05/17/2024	05/17/2024	2024MU0517IMP	Apprentice makeup
05/20/2024	06/03/2024	2024J27621	Pathway to Electrical Certification: Electrical Review
05/23/2024	05/23/2024	2024J261803	CPR, AED And First Aid For Adults
05/28/2024	05/28/2024	2024J261804	CPR, AED And First Aid For Adults
05/30/2024	08/08/2024	2024J28431	Energy Storage and Microgrid Training and Certification (ESAMTAC)
05/31/2024	05/31/2024	2024J261805	CPR, AED And First Aid For Adults
05/31/2024	05/31/2024	2024J26411	Tutoring For CA General Electrician State Certification Exam
05/31/2024	05/31/2024	2024J26421	Tutoring For CA VDV-FLS State Certification Exams

05/31/2024	05/31/2024	2024J28342	Code Calculations: Box Fill
06/01/2024	06/22/2024	2024J26851	Motor Control
06/01/2024	06/08/2024	2024J27431	OSHA 10
06/01/2024	06/28/2024	2024J27622	Pathway to Electrical Certification: Electrical Review
06/03/2024	06/03/2024	2024J26021	Electric Vehicle Charging Station (EVCS)
06/03/2024	06/03/2024	2024J261806	CPR, AED And First Aid For Adults
06/03/2024	07/22/2024	2024J26731	Fiber Optic Cabling Systems
06/04/2024	06/25/2024	2024J27432	OSHA 10
06/04/2024	08/06/2024	2024J27881	Fire/Life Safety Prep For State Certification
06/05/2024	06/17/2024	2024J27391	Pathway to Electrical Certification: Codeology (Plan, Build, Use)
06/05/2024	07/24/2024	2024J27671	Practicing Leadership: Foreman Development Series
06/07/2024	06/07/2024	2024J261807	CPR, AED And First Aid For Adults
06/07/2024	06/07/2024	2024MU0607	Apprentice Makeup Class
06/07/2024	06/07/2024	2024MU0607ETIMP	Electrician Trainee Makeup class
06/07/2024	06/07/2024	2024MU0607IMP	Apprentice Makeup
06/10/2024	07/29/2024	2024J26852	Motor Control
06/12/2024	06/12/2024	2024J261808	CPR, AED And First Aid For Adults
06/12/2024	07/31/2024	2024J27841	Copper Structured Cabling Systems
06/13/2024	08/01/2024	2024J27781	Rigging for the Electrical Industry
06/18/2024	07/23/2024	2024J26111	Bluebeam
06/18/2024	08/06/2024	2024J26351	Conduit Bending
06/19/2024	07/08/2024	2024J27321	Pathway to Electrical Certification: Grounding, NEC Art 250
06/21/2024	06/21/2024	2024J261809	CPR, AED And First Aid For Adults
06/21/2024	06/21/2024	2024J26412	Tutoring For CA General Electrician State Certification Exam
06/21/2024	06/21/2024	2024J26422	Tutoring For CA VDV-FLS State Certification Exams
06/21/2024	06/21/2024	2024J28351	Code Calculations: Conductor Ampacity
06/21/2024	06/21/2024	2024MU0621	Apprentice Makeup Class
06/21/2024	06/21/2024	2024MU0621ETIMP	Electrician Trainee Makeup
06/21/2024	06/21/2024	2024MU0621IMP	Apprentice Makeup Class
06/22/2024	08/15/2024	2024J28182	CALCTP Technical
06/25/2024	06/25/2024	2024J26022	Electric Vehicle Charging Station (EVCS)
06/26/2024	06/26/2024	2024J261810	CPR, AED And First Aid For Adults
06/26/2024	08/15/2024	2024J28181	CALCTP Technical
06/27/2024	08/08/2024	2024J26191	Medium Voltage Splicing

06/27/2024	08/16/2024	2024J27441	OSHA 30/EM-385 Construction Hazard Awareness
06/28/2024	06/28/2024	2024MU0628	Apprentice Makeup Class
06/28/2024	06/28/2024	2024MU0628ETIMP	Electrician Trainee Makeup Class
06/28/2024	06/28/2024	2024MU0628IMP	Apprentice Makeup
07/02/2024	07/02/2024	2024J261811	CPR, AED And First Aid For Adults
07/02/2024	08/06/2024	2024J27171	Introduction to Fire Alarm Systems
07/10/2024	07/10/2024	2024J261812	CPR, AED And First Aid For Adults
07/10/2024	07/29/2024	2024J27331	Pathway to Electrical Certification: Code Calculations
07/10/2024	07/31/2024	2024J27433	OSHA 10
07/12/2024	07/12/2024	2024J26023	Electric Vehicle Charging Station (EVCS)
07/12/2024	07/12/2024	2024J261813	CPR, AED And First Aid For Adults
07/12/2024	07/12/2024	2024J26413	Tutoring For CA General Electrician State Certification Exam
07/12/2024	07/12/2024	2024J26423	Tutoring For CA VDV-FLS State Certification Exams
07/12/2024	07/12/2024	2024J27971	Your Pension & Health/Welfare
07/12/2024	07/12/2024	2024J28371	Code Calculations: Raceway Fill
07/12/2024	07/12/2024	2024MU0712	Apprentice Makeup Class
07/12/2024	07/12/2024	2024MU0712ETIMP	Electrician Trainee Makeup
07/12/2024	07/12/2024	2024MU0712IMP	Apprentice Makeup
07/15/2024	07/15/2024	2024J261814	CPR, AED And First Aid For Adults
07/15/2024	07/17/2024		Mentorship Matters – Apprentice / Mentee Workshop
07/15/2024	07/17/2024		Mentorship Matters – Mentor Workshop
07/19/2024	07/19/2024	2024J261815	CPR, AED And First Aid For Adults
07/19/2024	07/19/2024	2024J27981	Your 401K Annuity Plan
07/19/2024	07/19/2024	2024MU0719	Apprentice Makeup Class
07/19/2024	07/19/2024	2024MU0719ETIMP	Electrician Trainee Makeup class
07/19/2024	07/19/2024	2024MU0719IMP	Apprentice Makeup
07/19/2024	07/19/2024	2024J26028	Electric Vehicle Charging Station (EVCS)
07/20/2024	07/20/2024	2024J27661	Boom Lift & Scissor Lift Training
07/25/2024	07/25/2024	2024J261816	CPR, AED And First Aid For Adults
07/26/2024	07/26/2024	2024J26414	Tutoring For CA General Electrician State Certification Exam
07/26/2024	07/26/2024	2024J26424	Tutoring For CA VDV-FLS State Certification Exams
07/26/2024	07/26/2024	2024J28361	Code Calculations: Voltage Drop
07/26/2024	07/26/2024	2024MU0726	Apprentice Makeup Class

07/26/2024	07/26/2024	2024MU0726ETIMP	Apprentice Makeup
07/26/2024	07/26/2024	2024MU0726IMP	Apprentice Makeup
07/27/2024	07/27/2024	2024J28341	Code Calculations: Box Fill
07/27/2024	07/27/2024	2024J28372	Code Calculations: Raceway Fill
07/27/2024	08/10/2024	2024J27434	OSHA 10
07/29/2024	07/29/2024	2024J261817	CPR, AED And First Aid For Adults
07/29/2024	08/19/2024		Cybersecurity for Electricians
07/30/2024	08/15/2024		Smart Building Energy Management Strategies (SBEMS)
07/31/2024	07/31/2024	2024J26024	Electric Vehicle Charging Station (EVCS)
07/31/2024	08/19/2024	2024J27291	Pathway To Electrical Certification: Journeyman Electrician's Exam Prep
08/01/2024	08/01/2024	2024J261818	CPR, AED And First Aid For Adults
08/02/2024	08/02/2024	2024J26415	Tutoring For CA General Electrician State Certification Exam
08/02/2024	08/02/2024	2024J26425	Tutoring For CA VDV-FLS State Certification Exams
08/02/2024	08/09/2024	2024J27721	NFPA 70E Arc Flash Hazard Awareness
08/02/2024	08/02/2024	2024MU0802	Apprentice Makeup Class
08/02/2024	08/02/2024	2024MU0802ETIMP	Electrician Trainee Makeup
08/02/2024	08/02/2024	2024MU0802IMP	Apprentice Makeup
08/03/2024	08/03/2024	2024J28352	Code Calculations: Conductor Ampacity
08/03/2024	08/03/2024	2024J28362	Code Calculations: Voltage Drop
08/07/2024	08/07/2024	2024J261819	CPR, AED And First Aid For Adults
08/09/2024	08/09/2024	2024J261820	CPR, AED And First Aid For Adults
08/09/2024	08/16/2024	2024J27722	NFPA 70E Arc Flash Hazard Awareness
08/09/2024	08/09/2024	2024J28191	Confined Space Entry Hazard Awareness
08/09/2024	08/09/2024	2024MU0809	Apprentice Makeup Class
08/09/2024	08/09/2024	2024MU0809ETIMP	Electrician Trainee Makeup
08/09/2024	08/09/2024	2024MU0809IMP	Apprentice Makeup
08/12/2024	08/12/2024	2024J26025	Electric Vehicle Charging Station (EVCS)
08/13/2024	08/13/2024	2024J26026	Electric Vehicle Charging Station (EVCS)
08/13/2024	08/13/2024	2024J261821	CPR, AED And First Aid For Adults
08/16/2024	08/16/2024	2024J26027	Electric Vehicle Charging Station (EVCS)
08/16/2024	08/16/2024	2024J26029	Electric Vehicle Charging Station (EVCS)
08/16/2024	08/16/2024	2024J261822	CPR, AED And First Aid For Adults

08/16/2024	08/16/2024	2024J26416	Tutoring For CA General Electrician State Certification Exam
08/16/2024	08/16/2024	2024J26426	Tutoring For CA VDV-FLS State Certification Exams
08/16/2024	08/16/2024	2024MU0816	Apprentice Makeup Class
08/16/2024	08/16/2024	2024MU0816ETIMP	Electrician Trainee Makeup
08/16/2024	08/16/2024	2024MU0816IMP	Apprentice Makeup
08/23/2024	08/23/2024	2024MU0823	Apprentice Makeup Class
08/23/2024	08/23/2024	2024MU0823ETIMP	Electrician Trainee Makeup
08/23/2024	08/23/2024	2024MU0823IMP	Apprentice Makeup