

Journeyman Class Schedule ETledu.org



4675 Viewridge Avenue
San Diego, CA 92123-1644

Fall 2023 semester
Vol. 2023-3 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 Journeyman 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@sdeitt.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@sdeitt.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. EVITP certifications will only be issued by EVITP 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 and passing of the exam.

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 |
|-----------|-----|-----------|------|-----------|------------|
| 11/13 | Mon | 5-8:30pm | 102 | San Diego | Collier |
| 11/14 | Tue | 5-8:30pm | 102 | San Diego | Collier |
| 11/15 | Wed | 5-8:30pm | 102 | San Diego | Collier |

| | | | | | |
|-------|-----|----------|-----|-----------|----------|
| 12/8 | Fri | 5-8:30pm | 102 | San Diego | Collier |
| 12/11 | Mon | 5-8:30pm | 214 | San Diego | Fieweger |
| 12/15 | Fri | 5-8:30pm | 214 | San Diego | Helms |

AUDIO / VIDEO SYSTEMS

This course covers components, terminations, basic testing, processing, and installation practices for Audio and Video Systems. This course will include lecture content and hands-on labs.

| Day(s) | Start | End | Sessions | Time | Room | Location | Instructor |
|--------|-------|-------|----------|----------|------|-----------|------------|
| Thu | 9/7 | 12/15 | 15 | 5-8:30pm | 110 | San Diego | Rossi |

No class on 11/23.

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 |
|--------|-------|------|----------|----------|------|-----------|------------|
| Fri | 10/20 | 12/8 | 6 | 5-8:30pm | 213 | San Diego | Baxter |

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 | 11/4 | 11/4 | 1 | 8am-12pm | 201 | San Diego | Smart Safety |

CALCTP (California Advanced Lighting Control Training Program) Acceptance Technician

PRE-REQUISITE: Successfully completion of the CALCTP Technical or Systems course. Student must download and submit Application for CALCTP-AT Technician (<https://www.calctp.org/acceptance-technicians-become>) and submit to the organization listed on the application (ICF International) prior to enrollment. Once the application is approved, it must be presented to the Training Center prior to enrollment in the CALCTP-AT course. This California Advanced Lighting Controls Training Program-Acceptance Technician (CALCTP-AT) certifies acceptance technician contractors and technicians. The course consists of the online prerequisites, lecture and a final exam.

| Day(s) | Start | End | Sessions | Time | Room | Location | Instructor |
|--------|-------|-------|----------|----------|------|-----------|------------|
| Tue | 10/10 | 11/21 | 7 | 5-8:30pm | 101 | San Diego | Tucker |

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 |
|---------|-------|-------|----------|----------|------|-----------|------------|
| Mon/Wed | 10/25 | 12/14 | 15 | 5-8:30pm | 101 | San Diego | Tucker |

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 | 9/29 | 9/29 | 1 | 4:30-8pm | Via Zoom | SD, Imp | Fleckenstein |

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 | 10/27 | 10/27 | 1 | 4:30-8pm | Via Zoom | SD, Imp | Fleckenstein |

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 | 11/3 | 11/3 | 1 | 4:30-8pm | Via Zoom | SD, Imp | Fleckenstein |

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 | 11/17 | 11/17 | 1 | 4:30-8pm | Via Zoom | SD, Imp | Fleckenstein |

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 | 9/15 | 11/3 | 8 | 4:30-8pm | Lab | Imperial* | Ceja |
| Mon | 10/23 | 12/11 | 8 | 5-8:30pm | 205 | San Diego | Mills |

*No classes on 11/10 & 11/23-11/24. *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 | 12/1 | 12/1 | 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 Copper 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 | 9/6 | 12/14 | 15 | 5-8:30pm | 112 | San Diego | Finneran / Overlund |

No class on 9/13, 10/11, 11/8 & 12/13. Thursday classes on 10/12 & 12/14.

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 | 9/8 | 9/8 | 1 | 4:30-8:30pm | 1 | Imperial* | Gonzales |
| Fri | 9/15 | 9/15 | 1 | 4:30-8:30pm | 203 | San Diego | Williams |
| Tue | 9/19 | 9/19 | 1 | 4:30-8:30pm | 203 | San Diego | Williams |
| Wed | 9/27 | 9/27 | 1 | 4:30-8:30pm | 203 | San Diego | Williams |
| Mon | 10/2 | 10/2 | 1 | 4:30-8:30pm | 203 | San Diego | Williams |
| Fri | 10/6 | 10/6 | 1 | 4:30-8:30pm | 203 | San Diego | Williams |
| Tue | 10/10 | 10/10 | 1 | 4:30-8:30pm | 203 | San Diego | Williams |
| Fri | 10/13 | 10/13 | 1 | 4:30-8:30pm | 1 | Imperial* | Gonzales |
| Wed | 10/18 | 10/18 | 1 | 4:30-8:30pm | 203 | San Diego | Williams |
| Thu | 10/26 | 10/26 | 1 | 4:30-8:30pm | 203 | San Diego | Bennett |
| Mon | 10/30 | 10/30 | 1 | 4:30-8:30pm | 203 | San Diego | Bennett |
| Fri | 11/3 | 11/3 | 1 | 4:30-8:30pm | 203 | San Diego | Bennett |
| Fri | 11/3 | 11/3 | 1 | 4:30-8:30pm | 1 | Imperial* | Gonzales |
| Thu | 11/9 | 11/9 | 1 | 4:30-8:30pm | 203 | San Diego | Bennett |
| Wed | 11/15 | 11/15 | 1 | 4:30-8:30pm | 203 | San Diego | Bennett |
| Tue | 11/21 | 11/21 | 1 | 4:30-8:30pm | 203 | San Diego | Bennett |
| Mon | 11/27 | 11/27 | 1 | 4:30-8:30pm | 203 | San Diego | Bennett |
| Fri | 12/1 | 12/1 | 1 | 4:30-8:30pm | 203 | San Diego | Bennett |
| Wed | 12/6 | 12/6 | 1 | 4:30-8:30pm | 203 | San Diego | Bennett |
| Fri | 12/8 | 12/8 | 1 | 4:30-8:30pm | 1 | Imperial* | Gonzales |
| Mon | 12/11 | 12/11 | 1 | 4:30-8:30pm | 203 | San Diego | Bennett |
| Thu | 12/14 | 12/14 | 1 | 4:30-8:30pm | 203 | San Diego | Bennett |

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

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 |
|--------|-------|-------|----------|----------|------|-----------|--------------|
| Tue | 9/26 | 11/28 | 10 | 5-8:30pm | 201 | San Diego | Fleckenstein |

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 |
|--------|-------|-------|----------|----------|------|-----------|----------------------|
| Wed | 9/6 | 12/14 | 15 | 5-8:30pm | 208 | San Diego | Greutmann / Thiessen |

No class on 9/13, 10/11, 11/8 & 12/13. See ATS Student Portal for additional class session info.

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 |
|--------|-------|-------|----------|----------|------|-----------|------------|
| Thu | 9/7 | 12/15 | 14 | 5-8:30pm | 111 | San Diego | Bressette |

No class on 10/12, 11/23. Fri classes on 10/13 & 12/15.

ADVANCED FIRE ALARM SYSTEMS

This course covers Fire Alarm Systems, NAC circuits, SLC circuits, IDC circuits, Fire Dampers, Relays, Troubleshooting, and a small amount of fire alarm programmer exposure. This course will include lecture content and hands-on labs.

| Day(s) | Start | End | Sessions | Time | Room | Location | Instructor |
|--------|-------|-------|----------|----------|------|-----------|------------|
| Tue | 9/12 | 12/18 | 15 | 5-8:30pm | 111 | San Diego | Bressette |

No class on 9/13, 10/11, 11/8 & 12/13. See ATS Student Portal for additional class session info.

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 | 9/12 | 12/18 | 14 | 5-8:30pm | Via Zoom | SD, Imp | Suttie |

Last class session will be on Mon, 12/18.

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 | 10/19 | 12/7 | 7 | 5-8:30pm | 101 | San Diego | Morrison |

No classes on 11/10 & 11/23-11/24.

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 |
|--------|-------|-------|----------|----------|------|-----------|------------|
| Wed | 10/18 | 12/13 | 8 | 5-8:30pm | 208 | San Diego | San Martin |

No class on 11/22.

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 | 11/17 | 12/1 | 2 | 5-8:30pm | 101 | San Diego | Eagles |

No class on 11/24.

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 |
|--------|-------|-------|----------|----------|----------|----------|------------|
| Tue | 10/24 | 11/14 | 4 | 5-8:30pm | Via Zoom | SD, Imp | Mills |

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 |
|---------|-------|-------|----------|----------|----------|----------|------------|
| Mon/Wed | 9/6 | 10/23 | 14 | 5-8:30pm | Via Zoom | SD, Imp | Miranda |

No class on 9/13 & 10/11.

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 |
|---------|-------|-------|----------|----------|------|-----------|------------|
| Fri | 10/20 | 12/8 | 6 | 5-8:30pm | 1 | Imperial* | Berry |
| Mon/Wed | 11/6 | 11/22 | 6 | 5-8:30pm | 211 | San Diego | Monahan |

No class on 11/10 & 11/24. * Class will be held at the Electrical Training Institute in Imperial, 2420 Imperial Business Park Drive, Imperial, CA 92251

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 | 10/2 | 10/11 | 4 | 5-8:30pm | 211 | San Diego | Monahan |

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 |
|---------|-------|------|----------|----------|------|-----------|------------|
| Fri | 9/15 | 10/6 | 4 | 5-8:30pm | 1 | Imperial* | Berry |
| Mon/Wed | 9/18 | 9/27 | 4 | 5-8:30pm | 211 | 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: 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 |
|---------|-------|------|----------|----------|------|-----------|------------|
| Mon/Wed | 10/16 | 11/1 | 6 | 5-8:30pm | 211 | San Diego | Monahan |

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 | 11/27 | 12/13 | 6 | 5-8:30pm | 211 | 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 |
|--------|-------|------|----------|----------|------|-----------|------------|
| Thu | 10/12 | 12/7 | 8 | 5-8:30pm | 112 | San Diego | Hersey |

No class on 11/23.

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 | 9/29 | 9/29 | 1 | 4:30-8pm | 211 | San Diego | Maushardt |
| Fri | 10/13 | 10/13 | 1 | 4:30-8pm | 211 | San Diego | Maushardt |
| Fri | 10/27 | 10/27 | 1 | 4:30-8pm | 211 | San Diego | Maushardt |
| Fri | 11/17 | 11/17 | 1 | 4:30-8pm | 211 | San Diego | Maushardt |
| Fri | 12/1 | 12/1 | 1 | 4:30-8pm | 211 | San Diego | Maushardt |
| Fri | 12/15 | 12/15 | 1 | 4:30-8pm | 211 | San Diego | Maushardt |

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 | 9/29 | 9/29 | 1 | 4:30-8pm | 204 | San Diego | Finneran |
| Fri | 10/13 | 10/13 | 1 | 4:30-8pm | 204 | San Diego | Finneran |
| Fri | 10/27 | 10/27 | 1 | 4:30-8pm | 204 | San Diego | Finneran |
| Fri | 11/17 | 11/17 | 1 | 4:30-8pm | 204 | San Diego | Finneran |
| Fri | 12/1 | 12/1 | 1 | 4:30-8pm | 204 | San Diego | Finneran |

| | | | | | | | |
|-----|-------|-------|---|----------|-----|-----------|----------|
| Fri | 12/15 | 12/15 | 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 | 11/17 | 11/17 | 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 | 11/3 | 11/3 | 1 | 4:30-7pm | 214 | 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

| Start Date | End Date | Class ID | Description |
|------------|------------|-------------|---|
| 09/06/2023 | 12/14/2023 | 2023J37841 | Copper Structured Cabling Systems |
| 09/06/2023 | 12/14/2023 | 2023J36731 | Fiber Optic Cabling Systems |
| 09/06/2023 | 10/23/2023 | 2023J37441 | OSHA 30/EM-385 Construction Hazard Awareness |
| 09/07/2023 | 12/15/2023 | 2023J38131 | Audio/Video Systems |
| 09/07/2023 | 12/15/2023 | 2023J37171 | Introduction to Fire Alarm Systems |
| 09/08/2023 | 09/08/2023 | 2023J361801 | CPR, AED And First Aid For Adults |
| 09/12/2023 | 12/18/2023 | 2023J37231 | Advanced Fire Alarm Systems |
| 09/12/2023 | 12/18/2023 | 2023J37881 | Fire/Life Safety Prep For State Certification |
| 09/15/2023 | 11/07/2023 | 2023J36351 | Conduit Bending |

| Start Date | End Date | Class ID | Description |
|------------|------------|-------------|---|
| 09/15/2023 | 09/15/2023 | 2023J361802 | CPR, AED And First Aid For Adults |
| 09/15/2023 | 10/06/2023 | 2023J37621 | Pathway to Electrical Certification: Electrical Review |
| 09/18/2023 | 09/27/2023 | 2023J37622 | Pathway to Electrical Certification: Electrical Review |
| 09/19/2023 | 09/19/2023 | 2023J361803 | CPR, AED And First Aid For Adults |
| 09/26/2023 | 11/28/2023 | 2023J38431 | Energy Storage and Microgrid Training and Certification (ESAMTAC) |
| 09/27/2023 | 09/27/2023 | 2023J361804 | CPR, AED And First Aid For Adults |
| 09/29/2023 | 09/29/2023 | 2023J38341 | Code Calculations: Box Fill |
| 09/29/2023 | 09/29/2023 | 2023J36411 | Tutoring For CA General Electrician State Certification Exam |
| 09/29/2023 | 09/29/2023 | 2023J36421 | Tutoring For CA VDV-FLS State Certification Exams |
| 10/02/2023 | 10/02/2023 | 2023J361805 | CPR, AED And First Aid For Adults |
| 10/02/2023 | 10/11/2023 | 2023J37391 | Pathway to Electrical Certification: Codeology (Plan, Build, Use) |
| 10/06/2023 | 10/06/2023 | 2023J361806 | CPR, AED And First Aid For Adults |
| 10/10/2023 | 11/21/2023 | 2023J38311 | CALCTP Acceptance Technician (AT) |
| 10/10/2023 | 10/10/2023 | 2023J361807 | CPR, AED And First Aid For Adults |
| 10/12/2023 | 12/07/2023 | 2023J37671 | Practicing Leadership: Foreman Development Series |
| 10/13/2023 | 10/13/2023 | 2023J361808 | CPR, AED And First Aid For Adults |
| 10/13/2023 | 10/13/2023 | 2023J36412 | Tutoring For CA General Electrician State Certification Exam |
| 10/13/2023 | 10/13/2023 | 2023J36422 | Tutoring For CA VDV-FLS State Certification Exams |
| 10/16/2023 | 11/01/2023 | 2023J37321 | Pathway to Electrical Certification: Grounding, NEC Art 250 |
| 10/18/2023 | 10/18/2023 | 2023J361809 | CPR, AED And First Aid For Adults |
| 10/18/2023 | 12/13/2023 | 2023J36851 | Motor Controls |
| 10/20/2023 | 12/08/2023 | 2023J36111 | Bluebeam |
| 10/20/2023 | 12/08/2023 | 2023J37331 | Pathway to Electrical Certification: Code Calculations |
| 10/23/2023 | 12/11/2023 | 2023J36352 | Conduit Bending |
| 10/24/2023 | 11/14/2023 | 2023J37431 | OSHA 10 |
| 10/25/2023 | 12/13/2023 | 2023J38181 | CALCTP Technical |
| 10/26/2023 | 10/26/2023 | 2023J361810 | CPR, AED And First Aid For Adults |
| 10/27/2023 | 10/27/2023 | 2023J38351 | Code Calculations: Conductor Ampacity |
| 10/27/2023 | 10/27/2023 | 2023J36413 | Tutoring For CA General Electrician State Certification Exam |
| 10/27/2023 | 10/27/2023 | 2023J36423 | Tutoring For CA VDV-FLS State Certification Exams |
| 10/30/2023 | 10/30/2023 | 2023J361811 | CPR, AED And First Aid For Adults |
| 11/03/2023 | 11/03/2023 | 2023J38371 | Code Calculations: Raceway Fill |

| Start Date | End Date | Class ID | Description |
|------------|------------|-------------|---|
| 11/03/2023 | 11/03/2023 | 2023J361812 | CPR, AED And First Aid For Adults |
| 11/03/2023 | 11/03/2023 | 2023J361814 | CPR, AED And First Aid For Adults |
| 11/03/2023 | 11/03/2023 | 2023J37971 | Your Pension & Health/Welfare |
| 11/04/2023 | 11/04/2023 | 2023J37661 | Boom Lift & Scissor Lift Training |
| 11/06/2023 | 11/22/2023 | 2023J37332 | Pathway to Electrical Certification: Code Calculations |
| 11/09/2023 | 11/09/2023 | 2023J361813 | CPR, AED And First Aid For Adults |
| 11/13/2023 | 11/13/2023 | 2023J36021 | Electric Vehicle Charging Station (EVCS) |
| 11/14/2023 | 11/14/2023 | 2023J36022 | Electric Vehicle Charging Station (EVCS) |
| 11/15/2023 | 11/15/2023 | 2023J361815 | CPR, AED And First Aid For Adults |
| 11/15/2023 | 11/15/2023 | 2023J36023 | Electric Vehicle Charging Station (EVCS) |
| 11/17/2023 | 11/17/2023 | 2023J38361 | Code Calculations: Voltage Drop |
| 11/17/2023 | 12/01/2023 | 2023J37721 | NFPA 70E Arc Flash Hazard Awareness |
| 11/17/2023 | 11/17/2023 | 2023J36414 | Tutoring For CA General Electrician State Certification Exam |
| 11/17/2023 | 11/17/2023 | 2023J36424 | Tutoring For CA VDV-FLS State Certification Exams |
| 11/17/2023 | 11/17/2023 | 2023J37981 | Your 401K Annuity Plan |
| 11/21/2023 | 11/21/2023 | 2023J361816 | CPR, AED And First Aid For Adults |
| 11/27/2023 | 11/27/2023 | 2023J361817 | CPR, AED And First Aid For Adults |
| 11/27/2023 | 12/13/2023 | 2023J37291 | Pathway To Electrical Certification: Journeyman Electrician's Exam Prep |
| 12/01/2023 | 12/01/2023 | 2023J38191 | Confined Space Entry Hazard Awareness |
| 12/01/2023 | 12/01/2023 | 2023J361818 | CPR, AED And First Aid For Adults |
| 12/01/2023 | 12/01/2023 | 2023J36415 | Tutoring For CA General Electrician State Certification Exam |
| 12/01/2023 | 12/01/2023 | 2023J36425 | Tutoring For CA VDV-FLS State Certification Exams |
| 12/06/2023 | 12/06/2023 | 2023J361819 | CPR, AED And First Aid For Adults |
| 12/08/2023 | 12/08/2023 | 2023J361820 | CPR, AED And First Aid For Adults |
| 12/08/2023 | 12/08/2023 | 2023J36024 | Electric Vehicle Charging Station (EVCS) |
| 12/11/2023 | 12/11/2023 | 2023J361821 | CPR, AED And First Aid For Adults |
| 12/11/2023 | 12/11/2023 | 2023J36025 | Electric Vehicle Charging Station (EVCS) |
| 12/14/2023 | 12/14/2023 | 2023J361822 | CPR, AED And First Aid For Adults |
| 12/15/2023 | 12/15/2023 | 2023J36026 | Electric Vehicle Charging Station (EVCS) |
| 12/15/2023 | 12/15/2023 | 2023J36416 | Tutoring For CA General Electrician State Certification Exam |
| 12/15/2023 | 12/15/2023 | 2023J36426 | Tutoring For CA VDV-FLS State Certification Exams |