

## Quality Electrical Worker Syllabus

**Time:** 8 hours

**Maximum Class Size:** 20

**Prerequisites:** None

**Course Description:** This 8-hour awareness course combines three LIUNA modules: Confined Space Awareness, Subpart K/Electrical and Permit Required Confined Space Isolation Procedures. This course is intended to give an overview of hazards that may be found working in confined or hazardous spaces, or around charged lines. As always, our first concern is the safety of our workers on the jobsite. Among the topics presented are Lock-Out/Tag-Out, GFCIs, OSHA safety requirements, and the difference between a “Competent” and “Qualified” person. Participants are required to pass an exit exam with a score of 80% or above.

### **Goals/Objectives/Student Learning Outcomes:**

- Define what a confined space is and identify at least three characteristics of a confined space.
- Identify two factors that lead to fatal injuries in confined spaces.
- Describe the four characteristics of a permit-required confined space.
- Define and describe the three types of atmospheric hazards found in confined spaces.
- Define exposure guides and list the two most commonly used guides and the organizations that establish them.
- List and describe the six types of physical hazards found in confined spaces.
- List and describe the three skills required pre-entry atmospheric tests in their proper order.
- Describe when and where continuous monitoring is required.
- List the components of a permit required confined space entry program.
- Explain the purposes of an entry permit.
- Identify the members of a confined space entry team and describe the duties of each.
- Describe at least two instances when training is required for confined space entry.
- Define ventilation and list and describe at least three problems associated with ventilating a confined space.
- Explain supply and exhaust ventilation and explain the advantages and disadvantages of each.
- Define the following terms:
  - Affected employee

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- Authorized employee
- Identify the four categories of hazardous energy and means for controlling each. Define the roles of affected and authorized employees when working under and energy control program.
- Use information learned during this module to critically examine scenarios and develop strategies for dealing with them.
- Describe the purpose of grounding an electrical system
- Demonstrate the inspection of electrical cords for physical damage. Given a variety of electrical cords, identify those that must not be used and explain why.
- Describe the operation of a ground fault circuit interrupter (GFCI).
- Explain the purpose of strain relief on electrical cords and tools.
- Given equipment to test, demonstrate the use of a receptacle tester and a continuity tester.
- Describe the requirements for working at various distances from live electrical lines and what to do if work has to be done within 10' of a live line.
- List and describe three OSHA citations related to electrical hazards.
- List four lockout/tag-out device requirements for controlling hazardous energy.
- Describe the procedures that must be followed for group lockout/tag-out.
- Identify and label the Energy Disconnecting means.
- Describe the eight lockout/tag-out energy control procedures.
- Describe three methods to isolate a pipe system.
- Complete a Quality Electrical Worker Exit Exam with a score of 80% or above.

### Standards

**Federal:** 29 CFR 1926 Subpart K (Electrical) Regulations, 1910.146 (Working in Confined Spaces) and 1910.147 (Lock Out/ Tag Out)

**State:** California Code of Regulations, Title 8, Section 2940 (5) (2) (36), for High Voltage Electrical Safety Orders, Work Procedures and Operating Procedures, Title 8, Section 5156 (b)(2) for working in confined spaces and Title 8, Section 3203,3314,6004, 2320.4-6, 2530.43 and 2530.86 (Lock-out/Block-out).

### Classroom Rules and Procedures

- All classes begin at 6:30 am and end at 3:00 pm
- Upon entering classroom, all participants must sign in and be seated by 6:30 am
- Class will consist of a combination of lecture, video, demonstration, coached group exercises, individual exercises and assessment.
- Students are required to report to class ready to work and maintain the provided PPE

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### Textbooks/Readings/Materials

- LIUNA Subpart K: Electrical IG & PG
- LIUNA Confined Space Awareness IG & PG
- LIUNA Permit Required Confined Space Isolation Procedures IG & PG
- Handout: OSHA's Definitions for terms "Competent" and "Qualified Persons"

### Personal Protective Equipment

- 20 pairs of gloves
- 20 pairs of Safety Glasses
- 20 pairs of Ear plugs
- 20 hard hats

### Course Requirements

To receive credit for the course, participants must:

- Be present for full eight hours
- Participate in all classroom exercises
- Pass a written exam

### Course Policies

- Participants must be on-time and ready to work.
- Participants must return from breaks on-time.
- Participants must participate in each exercise and assignment

### Assessment and Grading

Participants will be assessed on the following:

- All written exams must be passed with a score of 80% or above.

### Safety

Failure to maintain and use PPE may result in dismissal from the course.