

3 Day Permit Required Confined Space

COURSE SYLLABUS

Course Name	3 Day Permit Required Confined Space
Program Name	Safety and Health Entry
Course Hours	24
Prerequisites	None
Assessments	Written, Performance

■ COURSE DESCRIPTION

The 24-hour Confined Space in Construction: Entry course is designed to provide participants with the knowledge and skills associated with working in and around confined spaces. Emphasis is placed on hazard recognition, atmospheric monitoring, entry plans policy and procedures, PPE, and hazard mitigation.

Chicagoland Laborers' District Council Training and Apprenticeship Fund is accredited by the International Accreditation Service (IAS) under standard AC371: Accreditation Criteria for Curriculum Development for Workforce Qualification Programs. Confined Space in Construction: Entry was developed in accordance with this accreditation. More information on this standard can be found at <https://www.iasonline.org/services/training-agencies/1>.

■ COURSE OBJECTIVES

After completing Confined Space in Construction: Entry, participants will be able to:

1. Describe at least three characteristics of a confined space.
2. Identify two factors that lead to fatal injuries in confined spaces.
3. Describe the four characteristics of a permit-required confined space.
4. Define and describe the three types of atmospheric hazards found in confined spaces.
5. List the five types of airborne hazards.
6. List and describe the six types of physical hazards found in confined spaces.
7. List the four types of health effects from toxic chemicals.
8. List three routes of entry for chemicals to enter the body.
9. Define and describe warning signs of acute and chronic exposure to toxic chemicals.
10. List and describe the four types of heat stress.
11. Describe ways to prevent heat stress.
12. Explain and compare the differences, advantages, and disadvantages of direct-reading instruments (DRIs) vs. laboratory analysis of workplace samples.
13. Identify two situations where atmospheric monitoring would typically be required during confined space entry operations.
14. Given the proper equipment, conduct the required workplace monitoring for permit-required confined space entry.
15. Given various sample chemicals and the proper equipment, demonstrate the use and interpret the readings of colorimetric detector tubes and a multi-gas meter.

16. List and explain the appropriate responses if a personal monitoring device or sampling pump fails.
17. List the components of a permit-required confined space entry program.
18. Explain the purposes of an entry permit.
19. List at least five of the 15 required elements of an entry permit.
20. List the required elements of pre-entry atmospheric testing.
21. Identify the members of a confined space entry team and describe the duties of each.
22. Describe at least two instances when training is required for confined space entry.
23. Define ventilation.
24. List and describe at least three problems associated with ventilating a confined space.
25. List at least four controllable atmospheric hazards and the methods to control them.
26. Explain supply and exhaust ventilation; explain the advantages and disadvantages of each.
27. List at least five planning considerations to be given when ventilating confined spaces; explain why each is important.
28. Given a mock confined space, ventilation blower and manufacturers purge chart, calculate the amount of time to ventilate the confined space.
29. Evaluate a mock confined space for atmospheric hazards; plan and set up ventilation to remove hazards from the space in the time specified on a purge chart.
30. Define the following terms: affected employee, authorized employee, energy isolating device, energy source, lockout, lockout device, tagout, tagout device.
31. Identify the four categories of hazardous energy and the means for controlling each.
32. Define the roles of affected and authorized employees when working under an energy control program.
33. Given a scenario, identify potential sources of hazardous energy and a method for controlling each.
34. Explain the terms "assigned protection factor" (APF) and "maximum use concentration."
35. Explain the differences between an air-purifying respirator (APR) and an atmosphere supplying respirator.
36. Describe three types of APRs and give the APF for each.
37. List and explain at least six limitations of APRs.
38. List and explain the three-filter series and three filter-efficiency levels for particulate filters.
39. Explain the terms "breakthrough" and "warning properties" and list four steps that should be taken if breakthrough occurs.
40. Explain the differences among three breathing air delivery systems for breathing air: Continuous Flow; Demand; Pressure Demand.
41. Explain how a supplied airline respirator (SAR) works. List three limitations of the SAR and the APFs for both the SAR and the SAR with escape.
42. Explain how a self-contained breathing apparatus (SCBA) works, its limitations, and APF.
43. Explain the difference between a qualitative and a quantitative fit test and give two examples of each.
44. Demonstrate the proper procedures for inspecting and donning a full-face APR.
45. Explain and demonstrate the proper procedure for performing a positive and negative user seal check on an APR.
46. Demonstrate the proper procedure for inspecting and donning an SCBA.

■ COURSE CONTENT (24 HOURS)

Topics: Permit-Required Confined Space Hazards; Atmospheric Monitoring; Entry Program; Controlling Atmospheric Hazards

Permit-Required Confined Space Hazards

- Identifying confined spaces Recognizing hazards Health effects

Atmospheric Monitoring

- Workplace monitoring information
- Exercise/Hands-on activity: calibration procedure

Atmospheric Monitoring (continued)

- Workplace monitoring — hands-on stations

Entry Program

- Exercise: entry program

Controlling Atmospheric Hazards

- Exercise: controlling atmospheric hazards

Topics: Control of Hazardous Energy; Respiratory Protection

Control of Hazardous Energy

- Exercise: control of hazardous energy Exercise: confined space entry video

Respiratory Protection

- Assigned protection factors and maximum use concentrations Respiratory protection — show and tell

Respiratory Protection (continued)

- Respiratory protection — show and tell (continued)
- Performance checklist: inspection and donning of FFAPR
- Steps involved in a fit test
- Inspection and donning of SCBA

Topic: Entering a Confined Space

Entering a Confined Space

- Field exercise: entry permit
- Field exercise: skills assessment (hands-on activity)
- Course review
- Permit Required Confined Space Entry — Exam (A or B)

■ GRADING POLICY

The basis of grading for this course will consist of the following components:

- Attendance: Full attendance required
- Written Examinations: Passing grade is 80%
- Performance Assessments: Passing grade is 100%

Full satisfaction of each component is required to achieve a passing grade in this course.