EHS 101

● ○ ○ Foundation 75 hours 5 modules · 35 lessons

EHS Foundations: Programs, Hazardous Atmospheres, Confined Spaces, Energy Control & Chemicals

The regulations, written programs and life-critical controls every plant runs on: hazard analysis, gas detection, permit-space entry, lockout/tagout, electrical safety and chemical handling.

75	5	35	1,054	105	10
HOURS OF TRAINING	MODULES	LESSONS	STUDY CARDS	SCENARIOS	3D SIMULATORS

COURSE OBJECTIVES

By the end of this course you will be able to:

1. Explain how OSHA, the VOSH State Plan, EPA, Virginia DEQ and VDH divide responsibility, and which written programs a plant must keep.
2. Identify hazards, rank controls with the hierarchy of controls and prepare a job hazard analysis and tailgate talk.
3. Recognize H_2S, methane, chlorine, ammonia, CO and oxygen hazards, apply exposure limits and bump-test and calibrate gas monitors.
4. Evaluate permit-required confined spaces, complete entry permits and plan isolation, ventilation and non-entry rescue (29 CFR 1910.146).
5. Write equipment-specific lockout/tagout procedures and run group and shift-change lockouts (29 CFR 1910.147).
6. Apply NFPA 70E approach boundaries, arc flash labels and PPE selection, and recognize machine-guarding hazards.
7. Read GHS labels and SDSs, handle chlorine, hypochlorite and corrosives safely and decide when OSHA PSM and EPA RMP apply.

WHAT YOU WILL LEARN

Regulations & programs
OSHA/VOSH, EPA, DEQ and VDH roles, written programs and injury recordkeeping.

Hazard analysis
Hierarchy of controls, risk scoring, JHAs, tailgate talks and stop-work authority.

Gas detection
Exposure limits, %LEL, bump tests, calibration and alarm response.

Confined space entry
Permits, entry roles, isolation, ventilation and rescue.

Hazardous energy
Lockout/tagout, NFPA 70E boundaries and machine guarding.

Chemical safety
GHS and SDSs, disinfection chemicals, PSM/RMP, eyewash and spill response.

MAJOR TOPICS COVERED

Module 1	EHS Foundations: Regulations, Programs & Safety Culture	7 lessons
Module 2	Hazardous Atmospheres & Gas Detection	7 lessons
Module 3	Confined Space Entry & Rescue	7 lessons
Module 4	Hazardous Energy Control & Electrical Safety	7 lessons
Module 5	Chemical Safety & Process Safety Management	7 lessons

COURSE HIGHLIGHTS

- **75 hours** of structured, self-paced instruction with active-time tracking.
- **10 interactive 3D simulators** — rotate, explode and cut away real equipment, then change the controls and watch the numbers respond.
- **105 field scenarios** with background, decision points and worked answers.
- **1,054 study cards**, 35 printable checklists and hands-on calculators.
- **Module quizzes** and a completion certificate with a verification code.

WHO IT'S FOR

Operators, maintenance technicians, crew leaders and new safety coordinators at drinking-water and wastewater plants, pump stations and collection systems.

BEFORE YOU START

None. Take this course first in the EHS track.

WHERE TO NEXT

EHS 102 — Industrial Hygiene, Physical Hazards, Emergencies, Environmental Compliance & EHS Management

Start learning Create a free account at tryetech.com, open **Environmental Health & Safety** and begin with Module 1.