CYB 101

Foundation 75 hours 5 modules · 35 lessons

Cybersecurity Foundations: Threats, SCADA Architecture, CISA & EPA Frameworks, Governance & Access Control

Why water systems are targets, how plant control systems are built, the CISA, EPA, NIST and AWWA guidance and assessments utilities use, cyber governance and risk, and controlling who can reach your systems.

75	5	35	1,051	105	35
HOURS OF TRAINING	MODULES	LESSONS	STUDY CARDS	SCENARIOS	TECHNICAL FIGURES

COURSE OBJECTIVES

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

1. Explain why water and wastewater systems are targeted and how OT differs from IT, using real water-sector incidents.
2. Describe SDWA §1433 (AWIA) cybersecurity duties, EPA enforcement findings, CIRCIA status and Virginia's 24-hour reporting rule.
3. Map PLCs, RTUs, HMIs, historians, protocols, remote sites and vendor access onto the Purdue model and an industrial DMZ.
4. Use NIST CSF 2.0, CISA CPGs 2.0, the AWWA assessment tool, ISA/IEC 62443 and the EPA checklist to assess a utility.
5. Request and use CISA and EPA no-cost services: CSET, Cyber Hygiene scanning, architecture reviews and the Evaluation Program.
6. Build a cyber risk register, policies, vendor requirements and a funded improvement plan with leadership accountability.
7. Apply least privilege, strong passwords, phishing-resistant MFA, privileged-account control, secure remote access and physical protection.

WHAT YOU WILL LEARN

Threats & requirements
Attackers, water incidents, SDWA §1433, EPA enforcement and reporting duties.

Control system architecture
PLCs, HMIs, protocols, the Purdue model, telemetry and vendor access.

CISA & EPA guidance
CPGs, NIST CSF 2.0, AWWA tool, EPA checklist and free assessments.

Governance & risk
Cyber lead, risk register, policies, supply chain and funding.

Identity & access
Least privilege, default passwords, MFA and joiner/leaver control.

Remote & physical access
VPNs, jump hosts, session control, locked panels and media.

MAJOR TOPICS COVERED

Module 1	Cybersecurity Foundations for Water & Wastewater Utilities	7 lessons
Module 2	SCADA & Control System Architecture	7 lessons
Module 3	Frameworks, Standards & Cyber Assessments	7 lessons
Module 4	Cyber Governance, Risk Management & Policy	7 lessons
Module 5	Identity, Access & Physical Security	7 lessons

COURSE HIGHLIGHTS

- **75 hours** of structured, self-paced instruction with active-time tracking.
- **35 labeled technical figures** — plant networks, control systems and response steps, with numbered hotspots that explain each part.
- **105 field scenarios** with background, decision points and worked answers.
- **1,051 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 and I&C technicians, SCADA and IT staff, supervisors and managers at drinking-water and wastewater utilities.

BEFORE YOU START

None. Take this course first in the Cybersecurity track.

WHERE TO NEXT

CYB 102 — Network Defense, Detection, Incident Response, Recovery & Program Building

Start learning Create a free account at tryetech.com, open **Cybersecurity** and begin with Module 1.