



# Training

Dragos ICS-OT Cybersecurity

**Version 1.1**

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## Course Description

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The Dragos ICS-OT Cybersecurity course is a two-day purpose-built training designed to introduce ICS terminology and cybersecurity topics and practices beyond beginner level. Students will improve their understanding of OT systems, purpose, and the technologies used to protect and secure them. Students will also explore different assessment methodologies used in ICS-OT environments, the expertise and tools required to conduct them, and how assessments are used to improve and mature cybersecurity programs for these systems. At the conclusion of the course, students will be provided a Certification of Completion which can be submitted to accrediting bodies to count toward CLE hours.

## Learning Outcomes

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The Dragos ICS-OT Cybersecurity Training builds better understanding of the terminologies, purpose, security goals, and technologies deployed in OT environments and security programs. Upon completing this course, users will be able to:

- Analyze core ICS technologies and security concepts
- Understand how to safely assess ICS networks
- Explore different types of ICS operations
- Evaluate design decisions and priorities for OT system components

## Delivery

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The Dragos ICS-OT Cybersecurity course is available in two formats:

1. On Site: An in-person instructor-led course can take place at your office or other location of your choice\*; or, at a Dragos Training Center. Dragos Training Centers are located in:
  - Hanover, Maryland (Baltimore/Washington DC suburbs)
  - Houston, Texas
  - Dubai, UAE
2. Virtual ILT\*: A virtual instructor-led course conducted completely online. Offers reduced costs for attendees and flexibility of dates.

\* NOTE: The Dragos ICS-OT Cybersecurity training is *only* available onsite at Dragos Training Centers until December 1, 2022, after which virtual and onsite options will be available.

## Agenda

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### Day 1: Introduction to ICS Networks

- Introduction to Industrial Control Systems (ICS, DCS, SCADA, etc.)
- Sensors and actuators
- Industrial devices
- Industrial programming languages
- Protocols and communications
- Supervisory and Operations systems

### Day 2: Assessing the ICS Environment

- Overview types of security assessments in the context of ICS (both active and passive)
- Recommendations on safely assessing ICS
- Learn about the tools and techniques for collecting and analyzing assessment data
- Assessments
  - Architecture Review
  - Vulnerability Assessment
  - Penetration Testing
  - Red Team
- Assessment Project Planning
- Vulnerability Research
- Open Source Intelligence

## Labs

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Day 1	
Lab 1	Getting Online with the PLC
Lab 2	Modbus Traffic
Lab 3	ICS Communication Protocols

<b>Day 2</b>	
Lab 1	Port Scanning (nmap)
Lab 2	Vulnerability Scanning (OpenVAS)
Lab 3	Exploitation with Tools
Lab 4	Research and Exploit Development
Lab 5	OSINT (Google Hacking/Device Manuals/Shodan)

## How to Register

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Dragos Academy is our on-demand Learning Management System (LMS). There, you will be able to view the course catalog, course schedule, and register for courses. You can also obtain immediate on-demand training across a variety of topics including Dragos Platform training, ICS/OT subject-matter training, industry vertical-specific training, and threat intelligence.

To login to Dragos Academy, follow these steps for your role:

- Dragos Customers
  - Login to the Dragos Customer Portal
  - Select “Dragos Academy”
- Dragos Partners
  - Login to the Dragos Partner Portal
  - Click on the “Dragos Academy” link
- Dragos Employees
  - Login to “My Apps”
  - Click the Dragos Academy tile