Fundamentals of Cyber-Physical Security

Description

This course in support of the DOE Graduate Certificate in Transportation Safeguards and Security (GCTSS) provides a comprehensive overview of cyber-physical security- serving as an introduction to key concepts, terms, and approaches that support domestic and international efforts to improve the utilization of holistic security concepts in the protection of critical nuclear assets.

Learn …

- How to identify the purpose and importance of integrating cyber and physical security
- The philosophy and history of cyber-physical security
- Cyber-physical security events and why they matter
- Elements of the common language utilized for cyber-physical security
- Importance and methodology of risk and vulnerability assessments in the cyber-physical security process
- Various threat levels and how risk is controlled through a graded security approach.

For more information contact

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https://www.pnnl.gov/projects/np-621-fundamentals-cyber-physical-security

Pacific Northwest
NATIONAL LABORATORY

Course Pre/Co-requisites

- **Acceptance in UNR Transportation Security Graduate Certification Program.**
- **Bachelor's degree (preferably in Engineering or related field), basic knowledge of cyber or physical security, pre-assigned reading (which can be completed before the course) and Instructor consent for class admission.**

Course Modules

01 **Introduction to Cyber-Physical Security**
Discuss the importance of blended cyber-physical assessments.

02 **Cyber-Physical Fundamentals**
REMEMBER and UNDERSTAND key concepts in computer security and physical security.

03 **Architecture and Attack Vectors**
Discuss the important considerations for understanding and identifying the architectures and attack vectors associated with cyber-physical security.

04 **Vulnerabilities Assessments**
Understand the Vulnerability Assessment.

05 **Vulnerability Assessment for a Nuclear Power Plant**
Understand nuclear and radiological threats.

06 **PACRAT – Physical and Cyber Risk Analysis Tool**
Understand nuclear and radiological threats and describe the role of the Second Line of Defense (SLD) Program.