

X-Ray Baggage Scanner (Theory Only Training)

Course Duration : 8 Hours (Theory Only)





Course Description:

This theory-only training provides participants with essential knowledge of X-ray baggage scanning systems used in airports, government facilities, and high-security environments. The course explains how X-ray scanners work, how images are formed, and how threats can be identified through image analysis. Participants will also learn safety procedures, screening protocols, and regulatory requirements related to X-ray operations. This program is ideal for individuals needing theoretical understanding without hands-on practice.

Course Objectives

By the end of this course, participants will be able to:

- Explain the working principles of X-ray baggage scanning systems.
- Identify key components and functions of an X-ray scanner.
- Understand how X-ray images are formed and interpreted.
- Recognize theoretical examples of prohibited and dangerous items.
- Apply standard screening and threat detection procedures.
- Follow radiation safety protocols and regulatory guidelines.

Course Modules

Module 1: Introduction to X-Ray Screening Systems

- Purpose and importance of baggage screening
- Applications in airports and security facilities
- Overview of X-ray scanning technology

Module 2: Principles of X-Ray Imaging

- Generation and behavior of X-rays
- Image formation: absorption, density & color coding
- Types of X-ray images (dual view, multi-view, CT scanning concepts)

Module 3: Components of X-Ray Baggage Scanners

- X-ray generator and detectors
- Conveyor and tunnel system
- Image processing unit
- Operator workstation and alarm systems

Module 4: Understanding Dangerous Items

- Overview of prohibited items
- Organic, inorganic & metallic material differentiation
- Theoretical threat image recognition
- Common concealment methods

Module 5: Screening Procedures & Decision Making

- Baggage screening workflow
- Identifying suspicious items
- Escalation steps and reporting protocols
- Coordination with security teams

Module 6: Radiation Safety & Compliance

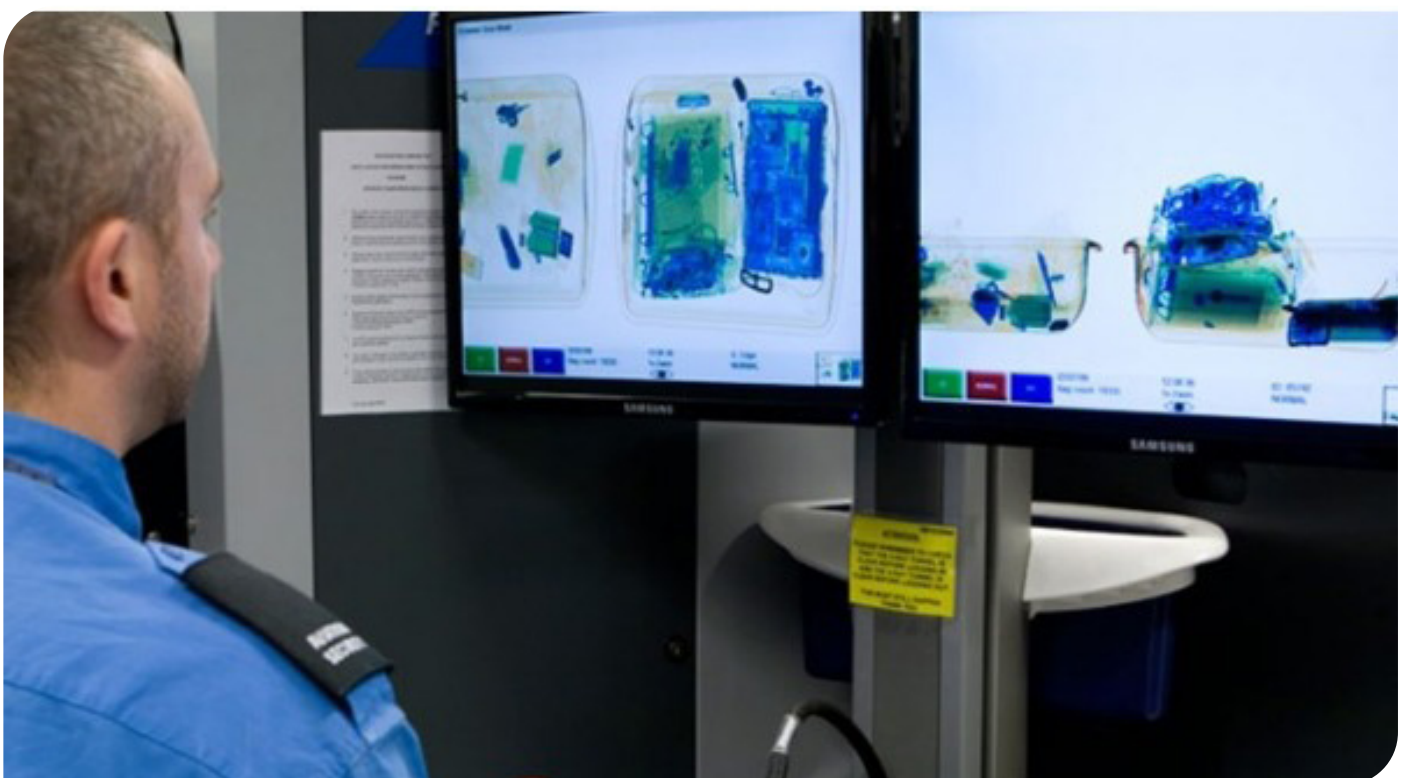
- Radiation hazards and exposure control
- Safety measures for operators
- International standards and regulatory compliance
- Emergency procedures

Module 7: Case Studies & Image Review (Theory Only)

- Sample non-interactive X-ray images
- Common mistakes in image interpretation
- Best practices for threat detection






Course Closing and Certification

- Recap of key training concepts
- Q&A and clarification session
- Final theoretical knowledge check
- Feedback and evaluation
- Issuance of Certificate of Completion to all participants who successfully complete the course





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