Passenger Screening and Security Technology Systems Training Course



19 - 23 Oct 2026

Cape town

4600 € (Per Person)

Ref: #AIR5963_270118

Course Introduction / Overview:

In an era of evolving global threats, the integrity of passenger screening and the effective implementation of security technology are paramount to ensuring public safety in transportation hubs. This comprehensive training course is meticulously designed to provide an in-depth understanding of the principles, technologies, and operational strategies that form the bedrock of modern passenger security. The curriculum delves into the complexities of threat detection, from foundational X-ray interpretation to the sophisticated capabilities of Advanced Imaging Technology (AIT) and Computed Tomography (CT) scanners. As discussed by security expert Philip Baum in his works on aviation security, a proactive and intelligent approach is essential. This course moves beyond mere procedural training, focusing on the strategic implementation and management of security systems. Participants will explore the critical balance between robust security measures and passenger facilitation, a central theme in publications like "Aviation Security: A Comprehensive Approach". BIG BEN Training Center has developed this program to empower security professionals with the knowledge to not only operate current technologies but also to evaluate, integrate, and manage the next generation of security solutions, ensuring they are prepared for the challenges of tomorrow.

Target Audience / This training course is suitable for:

- Airport Security Screening Officers.
- Aviation Security Managers and Supervisors.
- Border Control and Customs Agents.
- Security Technology Operators and Technicians.
- Law Enforcement Personnel assigned to transportation hubs.
- Regulatory Compliance Officers in the aviation sector.
- Security Consultants and System Integrators.
- Corporate Security Managers for airlines and airports.

Target Sectors and Industries:

- Aviation and Airport Operations.
- National and International Border Security Agencies.
- Public and Private Transportation Services.
- Critical Infrastructure Protection.
- Governmental security and intelligence agencies.
- Security Technology Manufacturing and Development.
- Maritime and Port Security Authorities.

Target Organizations Departments:

- Security Operations and Management.
- Compliance and Regulatory Affairs.
- Training and Professional Development.
- Technology and Innovation Departments.
- Risk Management and Assessment.
- Corporate Security and Asset Protection.
- Passenger Services and Facilitation.

Course Offerings:

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

- Master the operational principles of various screening technologies, including X-ray, AIT, and CT scanners.
- Develop and implement effective, risk-based passenger screening protocols.
- Enhance threat identification skills through advanced image interpretation and behavioral analysis techniques.
- Ensure security operations comply with international and national regulatory standards.
- Evaluate and select appropriate security technologies based on operational needs and threat assessments.
- Manage security checkpoint operations to optimize efficiency, throughput, and security effectiveness.
- Formulate strategies for integrating new technologies into existing security infrastructures.
- Conduct quality control and performance testing for security screening equipment and personnel.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be immersive, interactive, and highly practical, ensuring that theoretical knowledge is translated into real-world competence. This course utilizes a blended learning approach that combines expert-led presentations with dynamic group discussions, allowing participants to share experiences and challenge assumptions. A significant portion of the training is dedicated to case study analysis of actual security incidents and breaches, providing critical lessons on technology failures and human factors. Interactive simulations and practical exercises will be used to hone skills in X-ray image interpretation and threat detection. Participants will work in teams on projects focused on designing and implementing a security checkpoint, forcing them to consider budget, technology, and passenger flow. Continuous feedback from the instructor and peers is a core component, fostering a collaborative learning environment where complex security challenges are solved collectively. This hands-on, problem-solving approach ensures participants leave with skills they can immediately apply in their professional roles.

Course Agenda (Course Units):

Unit One Foundations of Passenger Security and Threat Assessment

- Introduction to Aviation and Transportation Security.
- The Evolving Global Threat Landscape.
- International and National Regulatory Frameworks (ICAO, TSA, ECAC).
- Principles of Risk-Based Security and Threat Analysis.
- Understanding Prohibited Items and Concealment Methods.
- The Psychology of a Security Screener.
- Introduction to Security Culture in a Transportation Environment.

Unit Two Core Screening Technologies and Procedures

- Principles of X-ray Technology and Image Interpretation.
- Walk-Through Metal Detectors (WTMD) and Hand-Held Metal Detectors (HHMD).
- Advanced Imaging Technology (AIT) for Passenger Screening.
- Baggage Screening Protocols for Cabin and Hold Luggage.
- Manual Search Techniques and Pat-Down Procedures.
- Screening of Liquids, Aerosols, and Gels (LAGs).
- Documentation and Passport Verification Technologies.

Unit Three Advanced Detection Systems and Biometrics

- Computed Tomography (CT) Scanners for Cabin Baggage.
- Explosives Trace Detection (ETD) Systems and Applications.
- Introduction to Biometric Systems in Passenger Identification (Facial, Iris, Fingerprint).
- Automated Screening Lanes (ASLs) for Checkpoint Efficiency.
- Non-Intrusive Inspection (NII) Technologies.
- Understanding and Mitigating the Insider Threat.
- Cybersecurity for Integrated Security Systems.

Unit Four Human Factors and Behavioral Detection

- The Role of Human Factors in Security Screening Effectiveness.
- Behavioral Detection and Analysis Techniques.
- Effective Communication and Conflict Resolution at the Checkpoint.
- Managing Screener Fatigue and Maintaining Vigilance.
- Decision-Making Under Pressure and Cognitive Bias.
- Passenger Profiling.
- Covert Testing and Performance Evaluation Programs.

Unit Five Security System Implementation and Management

- Strategic Planning for Security Technology Acquisition and Deployment.
- Designing and Optimizing a Security Checkpoint Layout.
- Quality Control and Assurance in Screening Operations.
- Equipment Maintenance and Calibration Protocols.
- Emergency Response and Incident Management at the Checkpoint.
- Future Trends in Passenger Screening Technology (AI, Machine Learning, Standoff Detection).
- Final Project.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

As biometric and AI-driven screening technologies become more prevalent, how can security professionals balance enhanced threat detection with the fundamental right to passenger privacy?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by adopting a holistic, strategic perspective on passenger security, moving beyond basic operational training to cultivate future leaders in the field. Unlike programs that focus narrowly on operating a single piece of equipment, our curriculum emphasizes the critical thinking required for the seamless implementation and management of complex, integrated security systems. We place a strong emphasis on the intersection of technology and human factors, recognizing that the most advanced hardware is only as effective as the personnel operating it. The curriculum is built around real-world case studies and forward-looking analyses of emerging threats and technologies, ensuring the content is not only current but also predictive. By integrating modules on regulatory compliance, checkpoint optimization, and quality control, the course offered by BIG BEN Training Center provides a comprehensive command of the entire security screening ecosystem. Participants gain not just technical proficiency, but the strategic foresight needed to design, manage, and continuously improve security operations in a dynamic and challenging global environment.