Advanced Airside Safety and Ramp Risk Management Training Course



18 - 22 Oct 2026

Doha

5500 € (Per Person)

Ref: #AVI1012_217117

Course Introduction / Overview:

The airside environment is a complex, high-stakes operational area where the slightest error can lead to catastrophic consequences. This course provides a comprehensive framework for understanding and managing the multifaceted risks associated with airside and ramp operations. Moving beyond basic compliance, this program delves into the proactive principles of a robust Safety Management System (SMS), emphasizing hazard identification, risk assessment, and mitigation strategies. We will explore the critical role of human factors in aviation safety, drawing on the pioneering work of academics like Dr. R. John Hansman on human-centered systems design. Participants will analyze real-world incidents and best practices outlined in key industry documents such as the IATA Airport Handling Manual (AHM). The curriculum is designed to foster a deep-seated safety culture within organizations, empowering personnel to not only follow procedures but to actively contribute to a safer operational environment. BIG BEN Training Center has developed this course to equip aviation professionals with the advanced skills needed to lead safety initiatives, reduce operational disruptions, and protect personnel, aircraft, and infrastructure effectively. This training is an essential investment in operational excellence and risk resilience for any organization operating within the airport environment.

Target Audience / This training course is suitable for:

- Airport Operations Managers.
- Ground Handling Supervisors and Agents.
- Airline Station Managers.
- Ramp and Apron Controllers.
- Airside Safety Officers and Managers.
- Turnaround Coordinators.
- Ground Support Equipment (GSE) Planners and Operators.
- Aviation Security Personnel.
- Airline and Airport Compliance Auditors.
- Emergency Response Planners.

Target Sectors and Industries:

- Commercial Airlines.
- Airport Authorities and Operators.
- Ground Handling Service Providers.
- Cargo and Logistics Companies.
- Fixed-Base Operators (FBOs).
- Corporate and Private Aviation.
- Military Airbase Operations.
- Governmental bodies, including Civil Aviation Authorities and Transportation Safety Boards.

Target Organizations Departments:

- Ground Operations.
- Safety and Compliance.
- Airport Operations and Management.
- Ramp Services.
- Technical and Engineering Services.
- Security and Emergency Services.
- Quality Assurance.
- Human Resources and Training.

Course Offerings:

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

- Develop and implement key components of an effective airside Safety Management System (SMS).
- Conduct comprehensive risk assessments and hazard analyses for all ramp operations.
- Apply human factors principles to mitigate errors in ground handling and aircraft servicing.
- Establish and manage a robust Foreign Object Debris (FOD) prevention program.
- Master safe operating procedures for various types of Ground Support Equipment (GSE).
- Coordinate effective aircraft turnaround procedures while maintaining the highest safety standards.
- Investigate airside incidents and accidents to identify root causes and prevent recurrence.
- Develop and execute airside emergency response plans for various scenarios.
- Ensure compliance with international and local aviation safety regulations, including ICAO and IATA standards.
- Promote a positive safety culture throughout their teams and organization.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, engaging, and practical, ensuring that participants can immediately apply their learning in a real-world operational context. This course moves beyond traditional lectures by incorporating a dynamic blend of learning techniques. A significant portion of the training will be dedicated to case study analysis, where participants will dissect real airside incidents to understand causal factors and identify preventative measures. Facilitated group discussions and brainstorming sessions will encourage the sharing of experiences and collaborative problem-solving. Interactive workshops will focus on practical skills such as conducting a ramp risk assessment and developing a FOD prevention plan. We will utilize simulation exercises to replicate challenging airside scenarios, allowing participants to practice decision-making in a controlled, risk-free environment. Throughout the course, our expert instructors provide continuous feedback and guidance, fostering a supportive learning atmosphere. This blended approach ensures a deep understanding of both the theoretical principles and the practical application of airside safety and risk management.

Course Agenda (Course Units):

Unit One: Foundations of Airside Safety and Regulatory Compliance

- Introduction to the Airside Environment and Its Unique Risks.
- The International Regulatory Framework (ICAO Annex 14, IATA AHM).
- Fundamentals of a Safety Management System (SMS) in Aviation.
- Roles and Responsibilities for Airside Safety.
- Understanding Airport Markings, Lighting, and Signage.
- Airside Vehicle Operator Permit (AVOP) Programs.
- Introduction to Safety Culture and Its Importance.

Unit Two: Ramp Operations and Hazard Management

- The Aircraft Turnaround Process from A to Z.
- Safe Aircraft Marshalling and Parking Procedures.
- Ground Support Equipment (GSE) Operations and Safety Protocols.
- Aircraft Fueling, Servicing, and Catering Safety.
- Foreign Object Debris (FOD) Prevention and Management Programs.
- Baggage and Cargo Handling Hazards.
- Pushback, Towing, and Engine Start-Up Procedures.

Unit Three: Human Factors in Airside Operations

- Introduction to Human Factors and the SHELL Model.
- Managing Human Error and Violations on the Ramp.
- Fatigue Risk Management for Ground Crew.
- Effective Communication and Teamwork (Crew Resource Management for Ground Ops).
- Situational Awareness and Decision-Making under Pressure.
- The "Dirty Dozen" in Aviation Maintenance and Ground Handling.
- Building a Just Culture for Safety Reporting.

Unit Four: Advanced Risk Assessment and Emergency Preparedness

- Techniques for Hazard Identification and Risk Assessment.
- Developing and Using a Risk Matrix for Ramp Operations.
- Airside Incident and Accident Investigation Methodologies.
- Root Cause Analysis Techniques.
- Developing and Implementing an Airport Emergency Response Plan (ERP).
- Managing Aircraft Incidents, Fuel Spills, and Fires on the Apron.
- Conducting Effective Airside Safety Audits and Inspections.

Unit Five: Specialized Operations and Future Trends

- Managing Adverse Weather and Winter Operations (De-icing/Anti-icing).
- Procedures for Handling Dangerous Goods on the Ramp.
- Airside Security and Access Control Measures.
- Low Visibility Operations (LVO) Procedures.
- The Impact of Technology and Automation on Ramp Safety.
- Sustainability in Ground Handling Operations.
- Continuous Improvement and the Future of Airside Safety Management.

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 automation and AI become more prevalent in ground support equipment, how will the role of human oversight in airside safety management need to evolve to mitigate new, unforeseen risks?

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

This course distinguishes itself by adopting a holistic and proactive approach to airside safety, moving far beyond simple regulatory checklists. While many programs focus solely on procedural compliance, this training integrates the critical, often-overlooked dimensions of human factors and organizational safety culture. We emphasize the "why" behind the rules, empowering participants to think critically and make sound safety decisions in dynamic, high-pressure situations. The curriculum is built around real-world case studies and practical risk assessment exercises, ensuring that learning is directly applicable to the participant's daily operational challenges. Unlike purely theoretical courses, our methodology prioritizes interactive workshops and facilitated discussions, leveraging the collective experience of the participants and instructor. Furthermore, the course content is forward-looking, addressing emerging trends such as the integration of automation on the ramp and the principles of a just culture. This focus on developing advanced analytical skills, fostering a proactive safety mindset, and preparing for future challenges provides a depth of understanding and practical capability that is unparalleled in standard airside training programs.