Professional Airside Safety and Ramp Management Training Course



14 - 18 Dec 2026

Cape town

4600 € (Per Person)

Ref: #AVI3663_270360

Course Introduction / Overview:

The airside environment is one of the most dynamic and risk-intensive areas in the aviation industry, where operational efficiency and safety are paramount. This course provides a comprehensive A to Z exploration of airside safety and ramp management, designed to equip professionals with the critical knowledge and skills needed to maintain a secure and efficient operational environment. Grounded in international standards and best practices, the curriculum delves into everything from fundamental ramp procedures and Ground Support Equipment (GSE) handling to advanced Safety Management Systems (SMS) and human factors. As highlighted by the pioneering work of Dr. Robert Helmreich on human factors in aviation, understanding the interplay between human performance and operational systems is crucial for mitigating risks. This principle is a cornerstone of our program. BIG BEN Training Center has structured this course to bridge the gap between regulatory theory and real-world application, ensuring participants can confidently manage the complexities of modern ramp operations, minimize incidents, and contribute to a robust safety culture within their organizations.

Target Audience / This training course is suitable for:

- Ramp Agents and Supervisors.
- Ground Handling Staff and Managers.
- Airside Operations Officers and Managers.
- Airport Safety and Compliance Officers.
- Airline Station Managers and Duty Officers.
- Ground Support Equipment (GSE) Operators and Technicians.
- Cargo Handling Supervisors.
- Aviation Security Personnel with airside responsibilities.
- Aspiring professionals seeking a career in airport ground operations.

Target Sectors and Industries:

- Commercial Airlines.
- Airport Authorities and Operators.
- Ground Handling and Ramp Service Companies.
- Cargo and Freight Airlines.
- Corporate and Private Aviation Operators (FBOs).
- Military Airbase Operations.
- Governmental bodies such as Civil Aviation Authorities and Airport Regulatory Agencies.
- Aviation Fueling Service Providers.

Target Organizations Departments:

- Ground Operations.
- Airside Operations and Management.
- Safety and Quality Assurance.
- Airport Services.
- Ramp Services.
- Cargo and Freight Handling.
- Technical and Engineering Services.
- Security Departments.
- Corporate Training and Development.

Course Offerings:

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

- Implement international standards for airside safety and ramp procedures.
- Identify and mitigate common ramp hazards through effective risk assessment.
- Conduct thorough pre-use inspections and operate Ground Support Equipment (GSE) safely.
- Manage aircraft turnaround processes to enhance on-time performance and safety.
- Apply correct aircraft marshalling signals and communication protocols.
- Understand the principles of human factors and their impact on ramp safety.
- Contribute to the development and implementation of an effective Safety Management System (SMS).
- Respond appropriately to airside incidents and emergencies.
- Ensure compliance with IATA and local civil aviation authority regulations.
- Promote a positive safety culture within their operational teams.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be immersive, engaging, and highly practical, ensuring that participants can translate theoretical knowledge into tangible workplace skills. We employ a blended learning approach that combines expert-led presentations with interactive group discussions, allowing for a deep dive into the core concepts of airside safety and ramp management. A significant portion of the course is dedicated to case study analysis of real-world ramp incidents, enabling participants to explore root causes and develop effective prevention strategies. Practical exercises and simulation activities will be used to reinforce key procedures such as GSE operation principles, aircraft marshalling, and emergency response protocols. Team-based problem-solving workshops encourage collaborative learning and allow participants to share experiences and best practices from their respective operational environments. Continuous feedback is provided by the instructor to guide learning and ensure all objectives are met, creating a dynamic and supportive educational experience that fosters both competence and confidence.

Course Agenda (Course Units):

Unit One: Foundations of Airside Safety and Operations

- Introduction to the Airside Environment.
- International and National Aviation Regulations.
- Understanding Airport Markings, Lighting, and Signage.
- Foreign Object Debris (FOD) Prevention and Management.
- Airside Vehicle Operations and Driving Rules.
- Standard Aviation Terminology and Communication Protocols.
- Personal Protective Equipment (PPE) and Personal Safety on the Ramp.

Unit Two: Ramp Handling and Ground Support Equipment

- Types and Functions of Ground Support Equipment (GSE).
- GSE Pre-Use Inspections and Safety Checks.
- Safe Operating Procedures for Common GSE.
- Aircraft Marshalling Signals and Communication.
- Baggage and Cargo Handling Procedures.
- Safety Around Parked and Moving Aircraft.
- Positioning of Equipment at the Aircraft Stand.

Unit Three: Aircraft Turnaround and Servicing Procedures

- The Critical Path of an Aircraft Turnaround.
- Aircraft Loading and Unloading Principles.
- Weight and Balance Fundamentals.
- Aircraft Fueling and Defueling Safety Procedures.
- Potable Water and Lavatory Servicing.
- Aircraft Pushback, Repositioning, and Towing Operations.
- De-icing and Anti-icing Procedures in Adverse Weather.

Unit Four: Human Factors and Safety Management Systems (SMS)

- Introduction to Human Factors in Aviation (The Dirty Dozen).
- Managing Fatigue and Stress in a 24/7 Operation.
- Developing a Proactive Safety Culture on the Ramp.
- The Four Pillars of a Safety Management System (SMS).
- Hazard Identification and Risk Assessment Techniques.
- Incident Investigation and Reporting Procedures.
- Safety Promotion and Training within the Organization.

Unit Five: Emergency Response and Regulatory Compliance

- Types of Airside Emergencies (Fires, Spills, Collisions).
- Ramp Emergency Response Plans and Drills.
- First Aid and Immediate Actions during an Incident.
- Airside Security Procedures and Threat Awareness.
- IATA Ground Operations Manual (IGOM) Standards.
- Preparing for and Participating in Airside Safety Audits.
- Future Trends in Ramp Technology and Safety.

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:

Considering the increasing automation in ground handling, how can human factors principles be adapted to ensure safety in a mixed environment of human and robotic operations?

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

This course distinguishes itself by offering a holistic and integrated perspective on airside operations, moving beyond mere procedural training. While many programs focus solely on the "what" and "how" of ramp tasks, this curriculum places significant emphasis on the "why" by deeply integrating the principles of Human Factors and Safety Management Systems (SMS) into every module. It treats safety not as a separate subject but as the fundamental framework underpinning all airside activities. Participants will not just learn to follow rules; they will learn to think critically about risk, understand the cognitive and psychological factors that influence performance, and contribute proactively to a resilient safety culture. The course structure is deliberately designed to bridge the gap between management-level safety theory and the practical realities faced by frontline staff. By analyzing real-world case studies and engaging in complex problem-solving scenarios, attendees gain the strategic insight needed to anticipate hazards, manage operational pressures, and lead safety initiatives, ensuring they return to their organizations as effective agents of operational excellence and safety improvement.