BLACKBIRD FOR TRAINING

Aviation Safety & Accident Investigation



Aviation Safety & Accident Investigation

Introduction

Aviation safety is the cornerstone of every successful air operation. Understanding how and why accidents occur—and knowing how to prevent them—is essential for operational excellence, regulatory compliance, and public trust.

This intensive program provides a structured overview of aviation safety principles and accident investigation methodologies, aligned with ICAO Annexes 13 and 19. Through real-world case studies and simulation exercises, participants will gain the skills to identify hazards, investigate incidents, and foster a strong safety culture within their organizations.

Course Objectives

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

- Understand international standards and frameworks for aviation safety and accident investigation.
- Apply systematic methods for investigating aviation accidents and incidents.
- Strengthen analytical skills and the ability to identify root causes.
- Recognize human and organizational factors that impact aviation safety.
- Develop strategies to enhance safety culture and prevent future accidents.

Course Outlines

Day 1: Aviation Safety Foundations

- The importance of aviation safety in global operations.
- ICAO safety standards: Annex 13 Accident Investigation and Annex 19 Safety Management Systems.
- Components of Safety Management Systems SMS: policy, risk, assurance, and promotion.
- Case study: analyzing lessons learned from a major aviation accident.

Day 2: Human and Organizational Factors in Safety

- The role of human performance in incidents and accidents.
- SHELL model and Swiss Cheese Theory.
- Teamwork, communication, and fatigue management in aviation operations.
- Workshop: evaluating human factors in flight and maintenance scenarios.



Day 3: Accident Investigation Process and Techniques

- Legal basis, objectives, and scope of accident investigation.
- Investigation steps: notification, on-site evidence collection, analysis, and reporting.
- Data collection tools: interviews, photographs, flight data recorders FDR/CVR, and documentation.
- Simulation: conducting an on-site accident investigation and reviewing evidence.

Day 4: Analysis, Root Cause Identification, and Reporting

- Techniques for identifying immediate and root causes.
- Analytical tools: Fault Tree Analysis FTA and 5 Whys method.
- Structuring factual and analytical investigation reports.
- Practical exercise: drafting and presenting a mock investigation report.

Day 5: Safety Culture and Continuous Improvement

- The role of leadership in building and sustaining a safety culture.
- Promoting a “Just Culture” and effective safety reporting systems.
- Integrating investigation findings into operational training and risk management.
- Action planning: developing a post-course aviation safety improvement roadmap.

Why Attend This Course: Wins & Losses!

- Gain comprehensive knowledge of aviation safety management and accident investigation.
- Strengthen analytical and decision-making skills for safety events.
- Develop professional competence in reporting and communicating safety issues.
- Acquire the confidence to proactively contribute to accident prevention.
- Improve operational oversight and compliance with international standards.
- Enhance resilience through structured risk management.
- Foster a culture of learning, accountability, and continuous improvement.
- Build trust with regulators, stakeholders, and the flying public.

Conclusion

Upon completing this program, participants will be fully equipped to apply international best practices in aviation safety and accident investigation.

They will leave with practical skills to conduct investigations, identify systemic risks, enhance reporting and communication, and promote a proactive safety culture. This course empowers aviation professionals to contribute to a safer, more reliable, and high-performing aviation industry.

