Aviation Safety Investigation Training Course

Professional Development Training Course Outline

Category	Aviation and Airport Management	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Aviation Safety Investigation Training is designed to enhance expertise in aircraft accident investigation, incident analysis, aviation risk management, and safety improvement strategies. The course equips aviation professionals with advanced knowledge of International Civil Aviation Organization (ICAO) standards, safety investigation methodologies, evidence collection techniques, human factors analysis, and accident prevention frameworks. Participants develop practical competencies required to conduct effective investigations that improve aviation safety performance and operational resilience.

With the increasing focus on safety management systems (SMS), data-driven aviation risk assessment, and proactive hazard identification, aviation organizations require skilled investigators who can analyze complex safety events and implement corrective actions. This training integrates global best practices, real-world aviation case studies, regulatory compliance requirements, and modern investigation tools to strengthen safety culture and support continuous improvement across the aviation industry.

Programme Curriculum

Aviation Safety Investigation Training Course

Introduction

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Course Objectives

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

1. Understand advanced aviation safety investigation principles and international regulatory frameworks.
2. Apply ICAO Annex 13 standards for aircraft accident and incident investigations.
3. Develop effective accident investigation plans using structured methodologies.
4. Conduct aviation occurrence reporting, evidence preservation, and documentation processes.
5. Analyze human factors, organizational factors, and operational risks influencing aviation accidents.
6. Apply root cause analysis and safety management techniques to prevent recurrence.
7. Utilize flight data recorder and cockpit voice recorder investigation principles.
8. Perform aviation risk assessment using modern safety analytics approaches.
9. Develop professional investigation reports aligned with global aviation standards.
10. Improve safety leadership, compliance monitoring, and organizational safety culture.
11. Apply forensic investigation techniques in aviation accident scenarios.
12. Evaluate corrective actions and safety recommendations effectively.
13. Enhance decision-making skills for complex aviation safety investigations.

Organizational Benefits

1. Improved aviation safety performance and operational reliability.
2. Enhanced accident prevention and risk mitigation capabilities.
3. Stronger compliance with ICAO and international aviation regulations.
4. Development of skilled internal aviation safety investigators.
5. Improved organizational safety culture and accountability.
6. Better emergency response and crisis investigation readiness.
7. Reduced operational risks, incidents, and financial losses.
8. Improved decision-making through evidence-based safety analysis.

Target Audiences

1. Aviation safety managers and safety officers.
2. Aircraft accident and incident investigators.
3. Airline operations managers and supervisors.
4. Airport safety and compliance professionals.
5. Air traffic management safety personnel.
6. Aircraft maintenance and engineering professionals.
7. Aviation regulators and government safety officials.
8. Aviation consultants and training specialists.

Course Duration: 5 days

Course Modules

Module 1: Fundamentals of Aviation Safety Investigation

- Introduction to aviation accident investigation principles and global safety frameworks.
- Overview of ICAO Annex 13 investigation requirements and standards.
- Roles and responsibilities of investigation teams and stakeholders.
- Investigation planning, coordination, and resource management techniques.
- Global case study: Investigation practices following major international aviation accidents.
- Practical exercise on developing an aviation investigation framework.

Module 2: Aviation Accident Investigation Process

- Understanding accident notification, response, and initial investigation procedures.
- Techniques for securing accident sites and preserving evidence.
- Investigation phases from data collection to final reporting.
- Coordination between airlines, regulators, and investigation authorities.
- Global case study: Lessons learned from the Air France Flight 447 investigation.
- Practical simulation of accident investigation activities.

Module 3: Evidence Collection and Analysis

- Methods for collecting physical, operational, and digital evidence.
- Aircraft wreckage examination and documentation procedures.
- Application of forensic investigation principles in aviation incidents.
- Analysis of operational records and safety documentation.
- Global case study: Evidence analysis from the Tenerife airport disaster.
- Development of evidence management strategies.

Module 4: Human Factors in Aviation Accidents

- Understanding human performance limitations in aviation operations.
- Analysis of crew decision-making and communication failures.
- Application of human factors investigation models.
- Identification of organizational and cultural safety issues.
- Global case study: Human factors analysis from the Colgan Air Flight 3407 accident.
- Practical evaluation of human performance factors.

Module 5: Flight Data and Cockpit Recorder Investigation

- Introduction to flight data recorder and cockpit voice recorder analysis.
- Understanding aircraft operational data interpretation.
- Techniques for reconstructing flight events.
- Application of technology in accident investigation.
- Global case study: Analysis of Ethiopian Airlines Flight 302.
- Practical exercise on flight data investigation methods.

Module 6: Safety Management Systems and Risk Analysis

- Understanding Safety Management Systems principles and applications.
- Integration of investigation findings into safety improvement programs.
- Aviation hazard identification and risk assessment methods.
- Development of corrective and preventive actions.
- Global case study: Safety improvements after runway safety incidents.
- Practical application of SMS investigation processes.

Module 7: Investigation Reporting and Safety Recommendations

- Structure and development of professional investigation reports.
- Writing evidence-based findings and conclusions.
- Developing effective aviation safety recommendations.
- Communicating investigation outcomes to stakeholders.
- Global case study: Safety recommendations from Boeing 737 MAX investigations.
- Practical preparation of an aviation investigation report.

Module 8: Advanced Aviation Investigation Practices

- Emerging technologies in aviation safety investigation.
- Artificial intelligence and data analytics in safety investigations.
- Managing complex international aviation investigations.
- Leadership skills for investigation teams.
- Global case study: International collaboration in major accident investigations.
- Final assessment and professional investigation improvement plan.

Training Methodology

- Interactive instructor-led presentations covering aviation investigation concepts.
- Practical accident investigation simulations and scenario-based exercises.
- Analysis of international aviation accident case studies.
- Group discussions focused on safety challenges and solutions.
- Workshops on investigation reporting and evidence evaluation.
- Role-playing exercises involving investigation teams and stakeholders.
- Digital tools and aviation safety analytics demonstrations.

- Knowledge assessments and practical competency evaluations.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.
f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

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