Human Factors in Aviation Safety 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

Human Factors in Aviation Safety Training Course is designed to enhance aviation professionals' understanding of the critical relationship between human performance, operational safety, and risk management. With increasing emphasis on aviation safety management systems (SMS), crew resource management (CRM), organizational resilience, and safety culture, this course equips participants with advanced knowledge of human behavior, decision-making, communication, and error prevention strategies within complex aviation environments. The program integrates modern aviation psychology, threat and error management (TEM), fatigue risk management, and accident prevention principles aligned with global aviation standards.

This comprehensive training course focuses on improving safety performance by addressing human limitations, teamwork challenges, situational awareness, leadership behaviors, and operational decision-making. Participants will explore international aviation case studies, safety investigations, and industry best practices from leading aviation organizations to develop practical solutions for reducing human error and improving organizational safety outcomes. The course supports aviation professionals in building proactive safety cultures and achieving operational excellence.

Programme Curriculum

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Course Objectives

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

1. Understand the principles of human factors engineering and their impact on aviation safety performance.
2. Apply human error management strategies to reduce operational risks and safety incidents.
3. Develop effective crew resource management (CRM) practices for enhanced teamwork.
4. Improve situational awareness and decision-making during aviation operations.
5. Analyze aviation accidents using human factors investigation techniques.
6. Implement safety culture improvement strategies within aviation organizations.
7. Apply threat and error management (TEM) models in operational environments.
8. Understand fatigue risk management systems (FRMS) and their safety implications.
9. Strengthen communication skills for high-risk aviation operations.
10. Evaluate organizational factors contributing to aviation incidents.
11. Promote proactive safety leadership and risk-based decision-making.
12. Apply human performance principles within safety management systems (SMS).
13. Develop strategies for continuous improvement in aviation safety operations.

Organizational Benefits

1. Improved aviation safety culture and operational reliability.
2. Reduced human error-related incidents and accidents.
3. Enhanced teamwork, communication, and coordination.
4. Stronger safety management systems and compliance performance.
5. Improved employee decision-making and leadership capability.
6. Better fatigue management and workforce performance.
7. Increased risk awareness across aviation operations.
8. Improved investigation and corrective action processes.
9. Enhanced organizational resilience and emergency preparedness.
10. Stronger alignment with international aviation safety standards.

Target Audiences

1. Airline safety managers and aviation safety officers.

2. Pilots, flight instructors, and cockpit crew members.
3. Air traffic controllers and aviation communication personnel.
4. Airport operations managers and supervisors.
5. Aircraft maintenance engineers and technical teams.
6. Aviation regulators and safety inspectors.
7. Cabin crew leaders and aviation trainers.
8. Aviation management and human resource professionals.

Course Duration: 5 days

Course Modules

Module 1: Fundamentals of Human Factors in Aviation Safety

- Introduction to aviation human factors principles and safety performance.
- Understanding human behavior within complex aviation systems.
- Relationship between human performance and operational risk management.
- Key concepts of aviation psychology and cognitive performance.
- Human factors models including SHELL and Swiss Cheese Model.
- Global case study: Analysis of human factors lessons from the Tenerife Airport disaster.

Module 2: Human Error Management and Accident Prevention

- Understanding causes and classifications of human errors.
- Identifying active failures and latent organizational weaknesses.
- Applying error prevention and mitigation techniques.
- Developing strategies for reducing aviation incidents.
- Human error analysis within safety investigation processes.
- Global case study: Human factors investigation of the Air France Flight 447 accident.

Module 3: Crew Resource Management (CRM) and Team Performance

- Principles and evolution of crew resource management programs.
- Improving communication, teamwork, and collaboration.
- Managing authority gradients and workplace relationships.
- Enhancing leadership and followership skills.
- Developing effective conflict resolution techniques.
- Global case study: CRM improvements following the United Airlines Flight 232 accident.

Module 4: Situational Awareness and Decision-Making

- Understanding situational awareness in aviation operations.
- Improving perception, interpretation, and decision-making skills.

- Managing workload during high-pressure situations.
- Applying cognitive strategies for better operational judgment.
- Recognizing decision-making traps and biases.
- Global case study: Decision-making analysis from the US Airways Flight 1549 successful water landing.

Module 5: Fatigue Risk Management and Human Performance

- Understanding fatigue causes and operational consequences.
- Principles of fatigue risk management systems (FRMS).
- Managing sleep, workload, and alertness challenges.
- Developing fatigue mitigation strategies.
- Improving workforce health and performance reliability.
- Global case study: Fatigue-related safety lessons from Colgan Air Flight 3407.

Module 6: Safety Culture and Organizational Human Factors

- Building positive aviation safety cultures.
- Understanding organizational influences on safety outcomes.
- Promoting reporting systems and just culture principles.
- Measuring safety attitudes and employee engagement.
- Developing proactive safety improvement programs.
- Global case study: Organizational factors from the NASA Space Shuttle Challenger investigation.

Module 7: Threat and Error Management (TEM)

- Introduction to threat and error management frameworks.
- Identifying operational threats before they become risks.
- Applying TEM principles during aviation operations.
- Improving monitoring and cross-checking behaviors.
- Integrating TEM into aviation training programs.
- Global case study: TEM application in modern airline flight operations.

Module 8: Human Factors Integration into Aviation Safety Management Systems

- Integrating human factors principles into SMS frameworks.
- Developing human-centered safety improvement initiatives.
- Conducting human factors risk assessments.
- Applying lessons learned from aviation safety investigations.
- Creating sustainable safety performance improvement strategies.
- Global case study: Implementation of human factors programs by major international airlines.

Training Methodology

- Instructor-led interactive classroom sessions focusing on practical aviation safety applications.
- Case study analysis from international aviation accidents and safety investigations.
- Group discussions and problem-solving exercises based on real operational challenges.
- Simulation-based learning activities to improve decision-making and teamwork.
- Practical workshops on human factors assessment and risk management.
- Role-playing exercises to strengthen communication and leadership skills.
- Review of international aviation standards and safety management frameworks.
- Participant presentations and peer-learning activities.

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

Start Date	End Date	Location	Price
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
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:

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