# Aircraft De-icing Operations Training Course

Professional Development Training Course Outline

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

## Course Introduction

Aircraft De-icing Operations Training Course is designed to enhance operational excellence, winter weather preparedness, and aircraft ground handling capabilities. The course focuses on advanced aircraft de-icing procedures, anti-icing technologies, fluid application techniques, safety compliance, and regulatory requirements to ensure safe aircraft dispatch during challenging weather conditions. With increasing demand for airport operational resilience, this training equips aviation professionals with the latest knowledge in snow and ice management, contamination control, aviation safety management systems (SMS), and efficient turnaround operations.

This comprehensive training program integrates global aviation best practices, International Civil Aviation Organization (ICAO) standards, airport winter operations strategies, and modern de-icing technologies. Participants will develop expertise in aircraft surface contamination recognition, de-icing equipment operation, environmental considerations, quality assurance, and emergency response procedures. The course supports airports, airlines, and ground handling organizations in achieving improved safety performance, operational reliability, and compliance with international aviation regulations.

## Programme Curriculum

**Aircraft De-icing Operations Training Course**

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**Course Objectives**

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

1. Understand advanced aircraft de-icing and anti-icing principles for winter aviation operations.
2. Apply ICAO and international regulatory standards for aircraft contamination management.
3. Develop effective aircraft winter operations and safety management strategies.
4. Operate modern aircraft de-icing equipment safely and efficiently.
5. Identify different types of ice, frost, snow, and contamination hazards affecting aircraft.
6. Implement quality assurance procedures for de-icing fluid application.
7. Improve aircraft turnaround time through optimized winter operations.
8. Understand de-icing fluid types, performance characteristics, and environmental impacts.
9. Apply risk assessment techniques in aircraft ground handling operations.
10. Enhance compliance with aviation safety management systems.
11. Develop emergency response procedures for severe winter weather conditions.
12. Improve communication between airlines, airports, and ground handling teams.
13. Adopt innovative technologies for efficient and sustainable aircraft de-icing operations.

**Organizational Benefits**

1. Improved aircraft operational safety during winter conditions.
2. Reduced flight delays and cancellations caused by ice contamination.
3. Enhanced compliance with ICAO and aviation regulatory requirements.
4. Improved efficiency of aircraft turnaround processes.
5. Reduced operational risks and safety incidents.
6. Better utilization of de-icing resources and equipment.
7. Increased employee competency and technical performance.
8. Improved environmental management of de-icing chemicals.
9. Strengthened airport and airline winter preparedness.
10. Enhanced customer satisfaction through reliable flight operations.

**Target Audiences**

1. Airport Operations Managers
2. Airline Ground Operations Personnel
3. Aircraft Maintenance Engineers
4. Ground Handling Supervisors

5. Aviation Safety Managers
6. Airport Winter Operations Teams
7. Flight Dispatchers and Airline Operations Controllers
8. Aviation Regulatory and Compliance Professionals

**Course Duration:** 5 days

**Course Modules**

**Module 1: Fundamentals of Aircraft De-icing Operations**

- Understanding aircraft contamination risks and winter weather challenges.
- Overview of aircraft de-icing and anti-icing concepts.
- Types of ice, snow, frost, and contamination affecting aircraft performance.
- Introduction to ICAO, FAA, and international de-icing standards.
- Roles and responsibilities of aviation teams during de-icing operations.
- Case Study: Winter operations management at Toronto Pearson International Airport.

**Module 2: Aircraft Ice Contamination and Safety Management**

- Identifying contamination hazards on critical aircraft surfaces.
- Understanding aerodynamic impacts of ice accumulation.
- Applying safety management system principles in de-icing operations.
- Conducting aircraft contamination inspections.
- Developing risk assessment procedures for winter operations.
- Case Study: Ice-related safety management practices at London Heathrow Airport.

**Module 3: De-icing and Anti-icing Fluids Technology**

- Understanding Type I, Type II, Type III, and Type IV de-icing fluids.
- Selecting appropriate fluids based on weather conditions.
- Managing fluid storage, handling, and application procedures.
- Understanding holdover time limitations and calculations.
- Evaluating environmental impacts of de-icing chemicals.
- Case Study: Sustainable de-icing fluid management at Amsterdam Schiphol Airport.

**Module 4: Aircraft De-icing Equipment and Operations**

- Operating modern aircraft de-icing vehicles and systems.
- Understanding spray equipment components and maintenance requirements.
- Applying correct spraying techniques and procedures.
- Managing equipment safety inspections and operational checks.
- Improving efficiency through advanced de-icing technologies.

- Case Study: Automated de-icing solutions at Helsinki Airport.

**Module 5: Aircraft De-icing Procedures and Best Practices**

- Developing step-by-step aircraft de-icing procedures.
- Understanding pre-deicing inspections and preparation activities.
- Applying effective communication during de-icing operations.
- Managing aircraft movement during winter conditions.
- Implementing quality control and operational monitoring.
- Case Study: Winter aircraft turnaround optimization at Denver International Airport.

**Module 6: Airport Winter Operations Management**

- Planning and coordinating airport-wide winter operations.
- Managing snow removal and runway contamination challenges.
- Coordinating airlines, airports, and ground service providers.
- Developing winter operational contingency plans.
- Monitoring weather forecasting and operational impacts.
- Case Study: Integrated winter management systems at Munich Airport.

**Module 7: Safety, Compliance, and Emergency Response**

- Implementing aviation safety regulations for de-icing operations.
- Managing emergency situations during severe weather conditions.
- Conducting safety audits and operational inspections.
- Developing incident reporting and investigation procedures.
- Improving teamwork during critical winter operations.
- Case Study: Emergency winter response strategies at Chicago O’Hare International Airport.

**Module 8: Future Trends in Aircraft De-icing Operations**

- Exploring digital technologies in winter aviation management.
- Understanding automation and smart de-icing solutions.
- Implementing sustainable aviation winter operation practices.
- Evaluating artificial intelligence applications in weather prediction.
- Developing continuous improvement strategies for de-icing operations.
- Case Study: Innovative winter aviation technologies at Oslo Airport.

**Training Methodology**

- Interactive instructor-led presentations covering aircraft de-icing principles and operational standards.

- Practical demonstrations of de-icing equipment and application techniques.
- Case studies from leading international airports and airlines.
- Group discussions focusing on winter operations challenges and solutions.
- Simulation exercises for aircraft contamination assessment and response.
- Workshops on safety management systems and operational improvement.
- Knowledge assessments and practical evaluation activities.
- Experience sharing sessions with aviation professionals.

**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 |

| Start Date | End Date | Location | Price |
|---|---|---|---|
| **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:

**Register Online Now**

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