Airport Surface Movement Guidance 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

Airport Surface Movement Guidance Training Course is designed to enhance knowledge, skills, and competencies in airport surface safety, aircraft ground movement coordination, and advanced airside management practices. With increasing global aviation demand, airports require highly trained professionals who can manage complex surface operations, prevent runway incursions, and optimize aircraft turnaround efficiency. This course focuses on Surface Movement Guidance and Control Systems (SMGCS), Advanced Surface Movement Guidance and Control Systems (A-SMGCS), air traffic coordination, apron management, taxiway operations, and international aviation safety standards.

This comprehensive training program integrates global best practices from leading airports and aviation organizations to develop expertise in surface movement planning, monitoring, communication procedures, and emergency response coordination. Participants will gain practical knowledge of ICAO standards, airport operational safety, intelligent surveillance technologies, and collaborative decision-making approaches required for modern airport environments. The course prepares aviation professionals to improve operational reliability, enhance passenger experience, and support safer and more efficient airport operations.

Programme Curriculum

Airport Surface Movement Guidance Training Course

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Course Objectives

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

1. Understand advanced Surface Movement Guidance and Control Systems (SMGCS) principles and applications.
2. Apply ICAO aviation safety standards for airport surface operations.
3. Develop effective runway and taxiway safety management strategies.
4. Improve aircraft ground movement coordination and operational efficiency.
5. Analyze runway incursion prevention techniques and mitigation strategies.
6. Utilize modern airport surveillance and monitoring technologies.
7. Enhance communication between air traffic controllers, pilots, and ground teams.
8. Implement effective apron management and aircraft turnaround procedures.
9. Apply risk assessment methodologies in airport surface operations.
10. Develop emergency response plans for airside incidents.
11. Evaluate Advanced Surface Movement Guidance and Control Systems (A-SMGCS).
12. Improve operational decision-making through collaborative airport management.
13. Strengthen compliance with international airport safety and security requirements.

Organizational Benefits

- Improved airport surface safety performance and reduced operational risks.
- Enhanced coordination between air traffic control and ground operations teams.
- Reduced runway incursions and aircraft ground movement incidents.
- Increased efficiency in aircraft turnaround and airport capacity utilization.
- Better compliance with ICAO and international aviation regulations.
- Improved emergency preparedness and incident response capabilities.
- Enhanced workforce competency in modern airport technologies.
- Stronger safety culture across airport operational departments.
- Improved communication and decision-making processes.
- Increased operational reliability and passenger service quality.

Target Audiences

1. Airport operations managers and supervisors.

2. Air traffic controllers and tower personnel.
3. Apron management and ground handling professionals.
4. Airport safety and compliance officers.
5. Aviation security and emergency response teams.
6. Airline operations and dispatch personnel.
7. Airport engineering and maintenance teams.
8. Aviation consultants and regulatory professionals.

Course Duration: 5 days

Course Modules

Module 1: Fundamentals of Airport Surface Movement Guidance

- Overview of airport surface movement operations and safety principles.
- Understanding SMGCS concepts, functions, and operational requirements.
- Roles of airport stakeholders in surface movement coordination.
- Surface movement challenges at international airports.
- ICAO guidance and global aviation safety frameworks.
- Case Study: Heathrow Airport surface movement coordination practices.

Module 2: Airport Layout, Taxiway, and Apron Operations

- Understanding airport movement areas, taxiways, and apron systems.
- Managing aircraft ground routing and movement procedures.
- Identifying operational hazards within airport surfaces.
- Improving aircraft flow and congestion management.
- Applying best practices in apron safety operations.
- Case Study: Singapore Changi Airport apron management systems.

Module 3: Advanced Surface Movement Guidance and Control Systems (A-SMGCS)

- Introduction to advanced surveillance and automation technologies.
- Functions of tracking, identification, and monitoring systems.
- Integration of radar, multilateration, and satellite technologies.
- Enhancing operational visibility through intelligent systems.
- Managing automated surface movement decision support tools.
- Case Study: Amsterdam Schiphol Airport A-SMGCS implementation.

Module 4: Runway Incursion Prevention and Safety Management

- Understanding causes and impacts of runway incursions.
- Implementing runway safety action plans.

- Applying hazard identification and risk assessment techniques.
- Strengthening communication and coordination procedures.
- Developing proactive surface safety management approaches.
- Case Study: Toronto Pearson Airport runway safety initiatives.

Module 5: Air Traffic Control and Surface Movement Coordination

- Understanding tower control responsibilities in surface operations.
- Improving pilot-controller communication procedures.
- Managing taxi clearances and aircraft movement instructions.
- Coordinating ground operations during peak traffic periods.
- Applying collaborative decision-making techniques.
- Case Study: Dubai International Airport airside coordination model.

Module 6: Airport Surface Surveillance and Technology Integration

- Exploring modern airport surveillance technologies.
- Understanding surface movement radar applications.
- Applying digital monitoring and operational intelligence tools.
- Improving situational awareness through technology.
- Integrating communication and information management systems.
- Case Study: Hong Kong International Airport surveillance operations.

Module 7: Emergency Response and Incident Management

- Developing emergency procedures for surface incidents.
- Managing aircraft breakdowns, collisions, and hazardous events.
- Coordinating emergency teams during airside situations.
- Applying crisis communication and recovery strategies.
- Conducting incident investigations and corrective actions.
- Case Study: Los Angeles International Airport emergency response framework.

Module 8: Future Trends in Airport Surface Operations

- Exploring artificial intelligence and automation in airport operations.
- Understanding digital transformation in airside management.
- Applying predictive analytics for operational improvement.
- Preparing airports for future capacity challenges.
- Developing sustainable and efficient surface movement strategies.
- Case Study: Frankfurt Airport smart airport operations initiatives.

Training Methodology

- Instructor-led interactive presentations covering airport surface movement concepts.
- Practical case studies based on global airport operational experiences.
- Group discussions focused on real-world aviation challenges.
- Simulation exercises for surface movement decision-making.
- Scenario-based learning involving runway and taxiway incidents.
- Workshops on risk assessment and safety improvement strategies.
- Technology demonstrations covering modern airport systems.
- Collaborative exercises involving airport operational coordination.

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

Start Date	End Date	Location	Price
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:

Register Online Now

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