Airport Design Standards 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

Modern airport infrastructure demands world-class planning, sustainable engineering, operational efficiency, regulatory compliance, digital transformation, resilience, passenger experience, and aviation safety. Airport Design Standards provide the foundation for developing airports that support increasing air traffic, advanced aircraft operations, smart technologies, environmental sustainability, and global connectivity. Airport Design Standards Training Course equips participants with practical knowledge of internationally recognized airport planning principles, airside and landside design standards, safety management systems, ICAO requirements, FAA guidance, capacity optimization, and emerging airport development trends. Participants will strengthen their ability to design airports that meet international operational, safety, and environmental expectations.

The training emphasizes innovative airport master planning, runway and taxiway design, terminal planning, airfield lighting systems, obstacle limitation surfaces, pavement engineering, emergency planning, accessibility, digital airport technologies, and sustainable infrastructure development. Through practical exercises and global case studies, participants gain the competencies required to evaluate airport layouts, improve operational performance, enhance passenger flow, optimize airport capacity, and support future-ready airport development aligned with international aviation standards and best practices.

Programme Curriculum

Airport Design Standards Training Course

Introduction

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Course Objectives

After completing this course, participants will be able to:

1. Interpret ICAO Annex 14 airport design requirements.
2. Apply international airport planning and design standards.
3. Design safe and efficient runway and taxiway systems.
4. Optimize airport terminal capacity and passenger flow.
5. Integrate sustainability into airport infrastructure planning.
6. Evaluate airport pavement design and maintenance requirements.
7. Develop compliant airside and landside infrastructure.
8. Implement airport obstacle limitation and safeguarding measures.
9. Utilize digital technologies in smart airport development.
10. Improve airport operational efficiency through design optimization.
11. Strengthen aviation safety and risk-based airport planning.
12. Assess airport expansion and master planning strategies.
13. Apply global airport design best practices to infrastructure projects.

Organizational Benefits

- Improved airport regulatory compliance.
- Enhanced aviation safety performance.
- Better infrastructure investment decisions.
- Increased airport operational efficiency.
- Optimized passenger experience.
- Stronger environmental sustainability.
- Reduced infrastructure lifecycle costs.
- Improved airport resilience and business continuity.
- Greater project delivery effectiveness.
- Enhanced organizational competitiveness.

Target Audiences

- Airport Engineers

- Civil Engineers
- Airport Planners
- Aviation Consultants
- Airport Operations Managers
- Infrastructure Project Managers
- Aviation Regulatory Officials
- Airport Development Professionals

Course Duration: 5 days

Course Modules

Module 1: Airport Planning Principles

- Airport planning frameworks
- Airport classification systems
- Master planning process
- Forecasting airport demand
- Airport land use planning
- Global Case Study: Singapore Changi Airport Master Plan

Module 2: Runway and Taxiway Design Standards

- Runway orientation principles
- Taxiway geometric design
- Separation standards
- Runway safety areas
- Aircraft movement efficiency
- Global Case Study: Dubai International Airport Airfield Design

Module 3: Airport Terminal Planning

- Passenger terminal layouts
- Passenger flow optimization
- Baggage handling integration
- Accessibility standards
- Commercial space planning
- Global Case Study: Istanbul Airport Terminal Development

Module 4: Airside Infrastructure Design

- Apron planning standards
- Aircraft parking systems

- Airfield lighting design
- Visual navigation aids
- Rescue and firefighting facilities
- Global Case Study: Amsterdam Schiphol Airside Development

Module 5: Airport Safety and Regulatory Compliance

- ICAO Annex 14 requirements
- Obstacle limitation surfaces
- Airport certification standards
- Safety management integration
- Risk assessment techniques
- Global Case Study: Heathrow Airport Safety Compliance

Module 6: Sustainable Airport Design

- Green airport concepts
- Energy-efficient infrastructure
- Carbon reduction initiatives
- Water management systems
- Climate resilience planning
- Global Case Study: Oslo Airport Sustainability Program

Module 7: Smart Airport Technologies

- Digital airport transformation
- GIS and airport planning
- Airport digital twins
- Intelligent transport systems
- Data-driven infrastructure management
- Global Case Study: Hamad International Smart Airport

Module 8: Airport Expansion and Future Development

- Capacity enhancement planning
- Airport modernization strategies
- Future aircraft infrastructure
- Project lifecycle management
- Infrastructure investment planning
- Global Case Study: Hong Kong International Airport Three-Runway System

Training Methodology

- Interactive expert-led presentations
- Practical airport design workshops
- Group discussions and collaborative learning
- Airport layout planning exercises
- Engineering design simulations
- International regulatory review sessions
- Real-world airport case study analysis
- Risk assessment and problem-solving activities
- Participant presentations and knowledge sharing
- Continuous assessment and instructor feedback

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:

Register Online Now

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