Integrated Airports Infrastructure and Facility Management Training Course

14 - 18 Dec 2026

Cairo

3700 € (Per Person)

Ref: #AIR5285_268329

Course Introduction / Overview:

This comprehensive training course provides a detailed look at modern airports infrastructure and facility management. It covers a wide array of topics, from the foundational principles of airport design to the latest practices in operational efficiency and maintenance. Participants will gain a holistic understanding of how to manage complex airport assets, ensuring safety, compliance, and long-term sustainability. The curriculum draws on key concepts from global academic research, including the work of Professor Norman J. Ashford, a well-known expert in airport engineering and planning. This training also references foundational texts in the field, such as "Airport Engineering" by Norman J. Ashford, which provides a comprehensive overview of the technical aspects of airport design and maintenance. BIG BEN Training Center has designed this course to equip professionals with the knowledge to maintain, operate, and plan for airport facilities effectively, improving operational flow and passenger experience. The program will also cover the implementation of advanced technologies and data-driven decision-making for managing airport infrastructure.

Target Audience / This training course is suitable for:

- Airport facilities managers and engineers.
- Infrastructure project managers.
- Operations and maintenance supervisors.
- Civil and structural engineers.
- Airport planners and consultants.
- Aviation authority and regulatory personnel.
- Professionals responsible for airport development and expansion.

Target Sectors and Industries:

- Aviation and airports.
- Government agencies and public works departments.
- Transportation infrastructure.
- Construction and engineering firms.
- Consulting services for the aviation sector.
- Aerospace and defense.
- Logistics and cargo handling.

Target Organizations Departments:

- Facilities and Infrastructure.
- Airport Operations.
- Engineering and Maintenance.
- Capital Projects and Planning.
- Safety and Compliance.
- Asset Management.
- IT and Technology Integration.

Course Offerings:

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

- Develop and implement a strategic plan for airport facility management.
- Master the principles of airport design and infrastructure planning.
- Apply effective maintenance strategies for runways, terminals, and airside areas.
- Ensure compliance with international aviation safety standards.
- Utilize data and technology to improve facility operational efficiency.
- Manage and optimize the use of airport assets.
- Evaluate and plan for infrastructure upgrades and expansion projects.
- Implement sustainable practices in facility management.
- Analyze and mitigate risks related to airport infrastructure.

Course Methodology:

This course uses a highly interactive and practical methodology to ensure a deep understanding of the material. The approach moves from foundational knowledge to hands-on application, focusing on real-world scenarios. We will utilize a mix of short, informative lectures, group discussions, and case studies that highlight best practices in airport facility management. Participants will engage in dynamic exercises to practice risk assessment and create a maintenance schedule for specific airport assets. This hands-on experience, coupled with immediate feedback from the instructors and peers, is designed to build confidence and practical skills. BIG BEN Training Center believes that learning is a collaborative process, so we will also dedicate time to peer-to-peer learning and open forums for questions and insights, allowing for a personalized and effective training experience for everyone.

Course Agenda (Course Units):

Unit One: Airport Infrastructure Planning and Design

- Principles of airport master planning.
- Runway and taxiway design and maintenance.
- Terminal building and apron planning.
- Air traffic control and navigation aids.
- Landside infrastructure, including roads and parking.
- Utilities and waste management systems.
- Sustainability in airport design and construction.

Unit Two: Facility Operations and Management

- Daily operational management of an airport.
- Maintenance protocols for critical infrastructure.
- Managing ground support equipment and airside vehicles.
- Terminal operations and passenger flow.
- Security infrastructure and access control.
- Emergency response and contingency planning.
- Coordination with air traffic control and airlines.

Unit Three: Maintenance Strategies and Technologies

- Reactive, preventive, and predictive maintenance models.
- Implementing a computerized maintenance management system (CMMS).
- Using data analytics for predictive maintenance.
- Inspecting and maintaining pavements and structures.
- HVAC, electrical, and plumbing systems management.
- Integrating smart technologies for facility monitoring.
- Life-cycle cost analysis for facility assets.

Unit Four: Regulatory Compliance and Safety Management Systems

- Understanding international and national aviation regulations.
- Auditing and inspections for compliance.
- Safety management systems (SMS) and their components.
- Risk assessment and mitigation strategies.
- Safety protocols for maintenance and construction activities.
- Incident reporting and investigation.
- Developing a culture of safety.

Unit Five: Financial Management and Asset Optimization

- Budgeting and cost control for facility management.
- Optimizing asset performance and utilization.
- Developing a long-term capital improvement plan.
- Evaluating new technologies and their return on investment.
- Procurement and contract management.
- Financial reporting and performance metrics.
- Future trends in airport infrastructure and facility management.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

In what ways does a comprehensive, data-driven facility management strategy transform an airport from a collection of static assets into a dynamic, interconnected operational hub?

What unique qualities does this course offer compared to other courses?

This training course is distinguished by its holistic approach to airport infrastructure and facility management, going beyond basic maintenance to cover strategic planning and financial oversight. We don't just teach you how to maintain assets; we teach you how to manage them as a unified, high-performing system. The curriculum incorporates insights from real-world airport operations and case studies, offering practical solutions to complex challenges. Our focus on integrating technology, from smart sensors to data analytics, ensures you're prepared for the future of the industry. The instructors at BIG BEN Training Center are experienced professionals who provide practical advice and real-world examples that you can apply immediately. This course is designed to equip you not only with the technical skills but also with the strategic mindset needed to make data-driven decisions that improve efficiency, enhance safety, and ensure the long-term sustainability of airport infrastructure. It’s an immersive program that will prepare you to lead facility management teams with confidence.