Airport Future Capacity Planning 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 Future Capacity Planning Training Course is designed to equip aviation professionals with advanced knowledge and practical skills in airport capacity forecasting, strategic infrastructure planning, demand analysis, and future aviation growth management. With the rapid expansion of global air travel, airports must adopt innovative capacity planning strategies, data-driven decision-making, airport master planning frameworks, and sustainable aviation development approaches to remain competitive. This course focuses on emerging trends such as smart airports, digital transformation, artificial intelligence in aviation planning, passenger growth modelling, air traffic forecasting, and resilient airport infrastructure development.

This training program provides participants with the expertise required to evaluate future airport requirements, optimize terminal and airside capacity, manage congestion risks, and develop long-term expansion strategies aligned with international aviation standards. Through global case studies, interactive discussions, and practical exercises, participants will explore successful airport capacity planning approaches used by leading aviation hubs while learning how to balance operational efficiency, environmental sustainability, financial feasibility, and future passenger demand.

Programme Curriculum

Airport Future Capacity Planning Training Course

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Course Objectives

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

1. Understand advanced airport capacity planning principles and future aviation growth trends.
2. Apply demand forecasting techniques using modern aviation analytics and predictive modelling tools.
3. Develop strategic airport master plans aligned with future operational requirements.
4. Evaluate terminal, runway, and airspace capacity limitations effectively.
5. Implement data-driven approaches for airport infrastructure investment decisions.
6. Analyze passenger traffic growth patterns and future aviation market demands.
7. Apply smart airport technologies to enhance capacity management.
8. Understand sustainable airport development and green aviation planning strategies.
9. Develop airport expansion strategies using international best practices.
10. Evaluate airport resilience planning for future operational challenges.
11. Improve decision-making through aviation data analytics and simulation techniques.
12. Understand global airport capacity management frameworks and standards.
13. Enhance leadership skills in strategic airport development planning.

Organizational Benefits

- Improved airport infrastructure planning and investment decisions.
- Enhanced ability to forecast future passenger and aircraft demand.
- Better utilization of existing airport facilities and resources.
- Increased operational efficiency and reduced congestion risks.
- Improved strategic alignment between airport growth and market demand.
- Enhanced sustainability and environmental planning practices.
- Stronger capacity management and risk mitigation capabilities.
- Improved competitiveness in the global aviation industry.
- Better collaboration between airport stakeholders.
- Increased readiness for future aviation challenges.

Target Audiences

1. Airport executives and senior aviation managers.
2. Airport planners and infrastructure development professionals.
3. Civil aviation authority officials.
4. Airport operations and capacity management teams.

5. Airline network planning and strategy professionals.
6. Aviation consultants and engineering professionals.
7. Airport project managers and investment specialists.
8. Transportation and urban development planners.

Course Duration: 5 days

Course Modules

Module 1: Fundamentals of Airport Future Capacity Planning

- Understanding airport capacity concepts and future aviation growth requirements.
- Exploring airport planning frameworks and strategic development approaches.
- Identifying key factors influencing future airport capacity needs.
- Reviewing global aviation demand trends and forecasting challenges.
- Case Study: Future growth planning strategies at Singapore Changi Airport.
- Applying capacity planning principles to real airport development scenarios.

Module 2: Airport Demand Forecasting and Traffic Modelling

- Understanding passenger, cargo, and aircraft movement forecasting methods.
- Applying analytical tools for aviation demand prediction.
- Evaluating economic, demographic, and market factors affecting growth.
- Developing accurate long-term aviation traffic forecasts.
- Case Study: Heathrow Airport passenger demand forecasting strategies.
- Using forecasting models to support airport investment decisions.

Module 3: Terminal Capacity Planning and Optimization

- Assessing passenger terminal capacity requirements and limitations.
- Improving passenger flow management and terminal efficiency.
- Planning future terminal expansion projects.
- Applying technology solutions for capacity optimization.
- Case Study: Dubai International Airport terminal development planning.
- Designing future-ready passenger processing systems.

Module 4: Runway and Airside Capacity Management

- Understanding runway capacity analysis and operational constraints.
- Evaluating aircraft movement capacity requirements.
- Developing strategies for increasing airside efficiency.
- Applying simulation techniques for runway planning.
- Case Study: Amsterdam Schiphol Airport runway capacity management.

- Creating solutions for future airside expansion challenges.

Module 5: Sustainable Airport Capacity Development

- Understanding environmental considerations in airport expansion.
- Integrating sustainability into future airport planning.
- Evaluating green infrastructure and energy-efficient solutions.
- Managing community and environmental impacts.
- Case Study: Oslo Airport sustainable development initiatives.
- Developing sustainable capacity planning strategies.

Module 6: Smart Airports and Digital Capacity Planning

- Exploring artificial intelligence and automation in airport planning.
- Applying digital twins and simulation technologies.
- Using data analytics for future capacity decisions.
- Improving operational efficiency through smart airport systems.
- Case Study: Seoul Incheon Airport digital transformation approach.
- Developing technology-driven capacity management solutions.

Module 7: Airport Expansion Strategy and Investment Planning

- Developing long-term airport expansion strategies.
- Evaluating financial and operational feasibility of projects.
- Prioritizing infrastructure investments based on future demand.
- Managing risks associated with airport development projects.
- Case Study: Istanbul Airport expansion and capacity planning.
- Creating effective airport growth investment plans.

Module 8: Future Airport Resilience and Strategic Planning

- Understanding resilience planning for future aviation disruptions.
- Developing flexible airport capacity management strategies.
- Preparing airports for emerging aviation technologies.
- Applying global standards for future airport development.
- Case Study: Los Angeles International Airport modernization program.
- Creating strategic action plans for future airport capacity growth.

Training Methodology

- Interactive instructor-led presentations focusing on airport capacity planning concepts.

- Practical exercises involving forecasting, modelling, and strategic planning activities.
- Global airport case studies highlighting successful capacity development approaches.
- Group discussions and problem-solving sessions based on real aviation challenges.
- Simulation exercises for evaluating airport expansion scenarios.
- Workshops focused on developing future airport capacity strategies.
- Knowledge sharing sessions with aviation industry best practices.

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
23 Nov 2026	27 Nov 2026	Physical	$3,000

Start Date	End Date	Location	Price
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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