TRAINING ACADEMY

AIRFIELD DESIGN TRAINING COURSE

TRAINAIR PLUS™
Bronze Member





ADB SAFEGATE
TRAINING ACADEMY

Comprehensive Engineering & Practical AGL Design. Key aspects:

Target audience:	**Delivery format**:
Personnel involved in AGL engineering & design	Hybrid (Online + Classroom/ Workshop)

Pre-requisites:	**Certification**:
Age +18 | English | AGL Essentials course	Official Completion Certificate (upon passing test)

Training Objectives

At the end of the training, participants should be able to:

- Explain the fundamentals of Airfield Ground Lighting systems design, including key components and technologies.
- Identify ICAO, FAA, EUROCONTROL, EASA, NATO, UK CAA, and STAC requirements for design.
- Describe how AGL systems enhance aircraft safety and airport operations under varying conditions.
- Demonstrate the ability to design and evaluate AGL systems that meet global and national standards.

What is covered?

- Applicable standards
- Airfield Operating Categories
    - No CAT, CAT I, CAT II & CAT III configurations
- Typical configurations and working principles
    - CCR calculations
    - Approach systems lay-out
    - Runway lighting lay-out
    - PAPI calculation
    - Taxiway lighting lay-out
- Functions and applications
- Electrical engineering
    - Primary and secondary cabling
    - Substation design
- Applications engineering and design
- Typical specifications
- ALCMS and interfaces control system design
- ILCMS and interfaces design specifications
- Mounting systems

Industry-standard Training

All training delivered by ADB SAFEGATE is conducted in accordance with the guidelines defined in:

EASA

- Easy Access Rules for Aerodromes, No 139-2014, latest edition

ICAO Standards and documents:

- ICAO Procedures or Air Navigation Services, document 9981 – Aerodromes
- Training Course Number 101 (Airport Engineering – Planning, Design and Construction) AGA ENG
- Training Course Number 104 (Airport Maintenance – Electrical including Airport Lighting and Power Generation) AGA MTC ELC.
- ICAO Design Manuals Parts 1, 4, 5, 6 & 9
- ICAO Annex 14

FAA circulars (current edition)

- AC150-5340-30
- AC150-5345-10/26/28/46/53

International Electro-technical Commission (IEC) documents:

- IEC 61821: Electrical installations for lighting and beaconing of aerodromes – Maintenance of aeronautical ground lighting constant current series circuits.
- IEC 61822: Electrical installations for lighting and beaconing of aerodromes – Constant Current Regulators
- IEC 61823: Electrical installations for lighting and beaconing of aerodromes – AGL series transformers
- IEC TS 61827: Electrical installations for lighting and beaconing of aerodromes – Characteristics of inset and elevated luminaires used on aerodromes and heliports
- IEC TS 62143: Aeronautical Ground Lighting – Guidelines for the development of a safety lifecycle methodology.

Target Audience

All persons involved in the engineering and design of AGL equipment.

Pre-requisites

- Minimum age: 18 years.
- Education / qualification requirements: none.
- Linguistic requirement: English for standard scheduled sessions. Events delivery in native language to be agreed upon.
- Pre-requirements: AGL Essentials course and job function related to airfield engineering or airfield systems design or aerodrome environment and tasks.

Training arrangements

Theoretical training parts are delivered by default in hybrid format:

- The first theoretical part of the training is delivered asynchronously via our training platform in English.
- The second part of the theory is delivered in classroom environment, with beamer/projector, desk for the instructor, desks for the students and seats for every individual. Sound system might be necessary if the attendance size requires.
- In PowerPoint-based lecturing style alternating with various interactions, discussions, and exercises.

Practical training parts are delivered by default:

- In workshop environment, with required tools, equipment and consumables, work benches, seating as required. Sound system might be necessary if the attendance size and facility requires.
- Following either the practical part instructions or based on the application of the theory modules seen before.
- Ad-hoc if required to demonstrate spontaneous discussion outcomes.

Training assessment

Assessments are performed at the end of the session, unless agreed differently between ADB SAFEGATE and the client. The tests are chosen among a defined list of examinations put at the disposal of the trainer, revised yearly. Assessments are:

- Online by default, in English
- Automatically corrected. These must not be corrected locally by the trainer.
- Awarding a completion certificate if the passing score is met or exceeded by the attendee.
- Invigilated by the trainer, unless agreed otherwise. Attendees might be invited to prove their identity if a doubt exists.

If the assessment criteria are not met, a certificate of attendance is granted to the attendees.

If the test is failed, the responsible training manager and client will be informed. A second attempt can be made within one week. If the second attempt is failed or not existing, the training must be passed fully again.

Adaptations to the training delivery can be made by the trainer, in accordance with the client's wishes. However, the agreed training scope during the ordering phase must be covered. Any non-coverage of planned content must be agreed at training manager level. Training content and processes are reviewed on a yearly basis.

Practical arrangements

In order to prepare your training in best conditions, you are invited to register latest 3 weeks in advance via our sales network: Country sales contacts are available here. Alternatively, please use the registration website https://airfieldtrainingacademy.com/ or create a training request on the Jira portal:
Training Academy - Jira Service Management (atlassian.net)

- **Training location** is to be agreed upon: this training can be delivered either on-site or at our regional offices.

In case the training is delivered at our **Belgian factory**, we have lined up a few practical details so you know what to expect from us:

- **Location address:**
  ADB SAFEGATE BV,
  Salyxlaan 9100, 1830 Machelen, Belgium. Tel +32 2 722 17 11.
- **Airport pick-up and drop-off** a taxi driver will wait for you at the airport and will bring you back to the airport when returning home
- **Hotel reservation via ADB SAFEGATE** We offer hotels at corporate rates, daily taxi shuttle included. If you make your own hotel booking, please make sure to also arrange your daily transport to and from ADB SAFEGATE.
- **Daily taxi shuttle** Only included in hotel reservations made via ADB SAFEGATE.
- **Lunch at noon** We serve a variety of warm and cold buffet and make sure to respect your halal, kosher, or vegetarian preference.
- **Drinks and coffee** are available continuously during the course.
- **Course handouts** all training slides will be printed and bundled to use during the course and take home with you.

Training Reservation and Cancellation conditions

- **Attendance confirmation** is required at latest **3 weeks before** the start of the training.
- **Registration** of new attendants is accepted up to 2 weeks before the start of the training.
- **Cancellations need to be communicated** to ADB SAFEGATE in written **at latest 3 weeks before** the start of the training. For cancellations made later than 3 weeks before the start of the training, the full training fee will be charged.
- **ADB SAFEGATE reserves the right to** cancel or postpone trainings until three weeks before the start of the training.
- **Food and hotel requirements** need to be communicated to ADB SAFEGATE at latest **3 weeks before** the start of the training.
- **Arrival date & arrival time** for the airport pick-up need to be communicated to ADB SAFEGATE at latest **one week** before the start of the training.

Course content online training part:

Online training content batch 1	Online training content batch 2
Indicators and signalling	Signs introduction
Approach introduction	Signs
Runway perimeter lights	A-VDGS introduction only
PAPI introduction	test & vote for topics to repeat
Other Runway lights	Obstacle lights
Taxiway Edge lights	Detection systems
Taxiway centreline lights	ASMGCS intro
Stopbar/ no entry bars	ARIWS/RWSL
Runway Guard Lights	Control system
Intermediate holding position	Maintenance
Turn pads & other lights	
1st Touch point with trainer (questions, remarks, repeat topics)	**2nd Touch point with trainer (questions, remarks, repeat topics)**

Course Content In-Classroom part:

	DAY 1	DAY 2	DAY 3	DAY 4
09:00	Welcome to AGL Design training	PAPI without ILS and with ILS	Installation 1/2	Power supply
11:10	Approach systems in-depth	PAPI Exercise	Installation 2/2	CCR calculation exercise
12:20	Lunch break	Lunch break	Lunch break	Lunch break
13:10	Approach design exercise	Factory visit	Guidance sign	Consolidation and Revision
14:20	Runway and stopbar design exercise	A-VDGS design	Guidance sign exercise	Discussion & Evaluation
16:00	End	End	End	End