



Ministry of Civil Aviation
Egyptian Aviation Academy

Light units of the Airfield Ground Lighting (AGL)

DESCRIPTION :

Purpose of the course:

How to adjust light units used on runways and taxiways and to recognize on the angle units and it's characteristics and its color and lighting distribution curves.

Course format :

- This course requires approximately **60** hours.
- This course is part of the diploma in Airfield lighting.

What you will learn :

Upon completing this course you will have the skills to:-

1. Identify on the lighting units, characteristics and colors.
2. Identify the dimensions between units, and how to measure the distance between the units and the marking lines.
3. Identify on the angles for each type of lighting units. And identify how to connect the circuits and it's path.
4. Identify on the dimensions of stop bar lighting units from runway center line and why.

5. The purpose is to know all mentioned according to ICAO and how to deal with the Civil Aviation Authority inspectors according to the rules and recommendations and how to deal with Annex 14 VOL. 1 .

Who should attend :

- Airfield Lighting Maintenance Director
- Airfield Lighting Maintenance Head of Departments
- Electrical Engineers
- Consulting offices (Project's directors and Electrical Engineers)
- Construction companys (Airports) – (Project's directors and Electrical Engineers) (Maintenance and Projects)

PREREQUISITES :

Participants should have prior knowledge of Airfield Ground Lighting (AGL).

COURSE CONTENT :

Introduction:

- **Approach Lighting System**
 - Explain how to adjust the vertical and straightening towers of App. Lights.
 - Explain how to adjust the horizontal App.light unit.
 - Explain how to adjust the elevation setting angles.
 - Explain how to adjust the horizontal alignment (longitudinal straightness)
 - Explain how to recognize App. lights units angles.
 - Training on lighting dustribution curves.
 - Training on how to connect the feeding cuircircuits.
- **Sequential Flashing Light system**
 - Explain how to adjust the vertical and straightening towers of flashing light.

- Explain how to adjust the horizontal of flashing light.
- Explain how to adjust the elevation setting angles.
- Explain how to adjust the horizontal alignment (longitudinal straightness).
- Explain how to recognize flashing lights units angles.
- Explain how to recognize control circuits.
- Training on lighting distribution curves.
- Training on how to connect the feeding circuits.

- **Runway Edge Light system**

- Training on the how to use the horizontal device adjustment.
- Training on adjusting the horizontal lighting units by setting device.
- Training on adjusting the straightening of the light and its guidance and longitudinal straightness.
- Explain how to recognize on edge light units angles.
- Explain how to recognize control circuits.
- Training on lighting distribution curves.
- Training on how to connect the feeding circuits.

- **Runway Centerline light system**

- Explain how to recognize on light units angles.
- Explain how to adjust the angle and avoid misalignment.
- Explain how to recognize the dimensions of the units and how to measure the dimensions between units and marking.
- Training on lighting distribution curves.
- Training on how to connect the feeding circuits.

- **Runway Touch Down Zone system**

- Explain how to recognize on light units angles.
- Explain how to adjust the angle and avoid misalignment.
- Explain how to recognize the dimensions of the units and how to measure the dimensions between units and marking.
- Training on lighting distribution curves.
- Training on how to connect the feeding circuits.

- **Runway Threshold and end system**

- Explain how to recognize on light units angles.
- Explain how to adjust the angle and avoid misalignment.
- Explain how to recognize the dimensions of the units and how to measure the dimensions between units and marking.
- Training on lighting distribution curves.
- Training on how to connect the feeding circuits.

- **Threshold Wing bar system**

- Explain how to recognize on light units angles.
- Explain how to adjust the angle and avoid misalignment.
- Explain how to recognize the dimensions of the units and how to measure the dimensions between units and marking.
- Training on lighting distribution curves.
- Training on how to connect the feeding circuits.

- **Precision Approach Path Indicator(PAPI) system**

- Training to adjust the horizontal for PAPI devices.
- Training to adjust the elevation angles for PAPI devices.
- Training on adjusting Tilt switch and it's importance for angles of PAPI devices.

- Adjust lenses and filters and reflectors and its importance.
- Training on lighting distribution curves.
- Training on how to connect the feeding circuits .

- **Stop Bar light system**

- Explain how to recognize on light units angles.
- Explain how to adjust the angle and avoid misalignment.
- Explain how to recognize the dimensions of the units and how to measure the dimensions between units and marking.
- Recognize on how to connect Lead-In circuit and control.
- Training on lighting distribution curves.
- Training on how to connect the feeding circuits.

- **Taxiway Center Line system**

- Explain how to recognize on light units angles.
- Explain how to adjust the angle and avoid misalignment.
- Explain how to recognize the dimensions of the units and how to measure the dimensions between units and marking.
- Training on lighting distribution curves.
- Training on how to connect the feeding circuits.

- **Taxiway Edge Light system**

- Training on the how to use the horizontal device adjustment.
- Training on adjusting the horizontal lighting units by setting device.
- Training on adjusting the straightening of the light and its guidance and longitudinal straightness.
- Explain how to recognize on edge light units angles.
- Explain how to recognize control circuits.

- Training on lighting distribution curves.

- Training on how to connect the feeding circuits.

- **Wind Direction Indicator(Wind Cones) system**

- Training on how to adjust guidance of light angles.

- Training on how to connect feeding and control circuits.

- Training on lighting distribution curves.

- Training on how to connect the feeding circuits.

- **Signs system**

- Training on how to adjust the horizontal and vertical signs and maintenance.

- Training on lighting distribution curves.

- Training on how to connect the feeding circuits.

- **Guard Light system**

- Training on the how to use the horizontal device adjustment.

- Training on adjusting the horizontal lighting units by setting device.

- Training on adjusting the straightening of the light and its guidance and longitudinal straightness.

- Explain how to recognize on edge light units angles.

- Explain how to recognize control circuits.

- Training on lighting distribution curves.

- Training on how to connect the feeding circuits.

- **Obstruction Lighting system**

- Training on the how to use the horizontal device adjustment.

- Training on adjusting the horizontal lighting units by setting device.

- Training on adjusting the straightening of the light and its guidance and longitudinal straightness.

- Explain how to recognize on edge light units angles.
- Explain how to recognize control circuits.
- Training on lighting distribution curves.
- Training on how to connect the feeding circuits.
 - **Flooding lighting system**
 - How to calculate the mast height.
 - How to make control on light units.

DURATION : 60 Hours

LEVEL : Electrical Engineers.

LANGUAGE INSTRUCTION : English

ACTIVITIES :

- Practical.
- Exercises.
- Final examination.

ADDITIONAL INFORMATION :

EXAM INFORMATION :

- **Exam Location:** At Egyptian Aviation Academy (EAA).
- **Exam format:**
- **Number of questions :**
- **Time allowance : hours .**
- **Passing grade : 60 correct answers .**
- **Distinction grade : 90 correct answers .**

- **Number of exam attempts : 1**

Certificate awarded :

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NEXT CLASS :

Schedule of this course

No.	Start date	End date	Location	Language	
1					
2					