

AW10 - General Systems & Cabin

From the Advanced Master ASAA
(Aviation Safety Aircraft Airworthiness)



Highlights

- Unique coverage of general systems
- Industrial expertise
- Technical visits

This module provides an overall understanding of aircraft major general systems and commercial cabin installation. It defines and explains their key design characteristics, performances and limitations, and the associated key certification requirements and means of compliance as per authorities' regulations.

Prerequisites

- A good engineering background
- Aircraft architecture and basic aeronautics knowledge
- Aircraft certification process and procedures
- FAR/CS25 safety objectives and basic knowledge of safety analysis

Key elements

Dates: 10 - 21 January 2022

Duration: 52 hours

For whom:

recent graduates, jobseekers and experienced employees

Location:

ISAE-SUPAERO, Toulouse

Course fees: 2 900 €

Language: English

Learning objectives

After completing this course, participants will be able to:

- Describe functional architectures, components and principles for safe design of aircraft general systems and cabin installation;
- Describe the main functioning and failure modes of aircraft general systems and cabin installation in order to evaluate their compliance to certification requirements;
- Determine and implement certification processes, requirements and means of compliance applicable for aircraft general systems;
- Determine and implement certification processes, requirements and means of compliance applicable for safety of commercial aircraft cabin and cargo areas;
- Collect and analyze in-depth and autonomously relevant regulatory certification documents for General Systems and Cabin/Cargo/Cockpit Safety domains.

Practical information and registration

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Course content

Electrical Systems

- System architecture and certification requirements

Fuel Systems

- System architecture, fuel tank safety and certification requirements

Landing Gears

- System architecture and certification requirements

Pneumatic Systems

- Architectures of Bleed system, Environmental Control System, Pressurization, Pneumatic Ice Protection
- Certification requirements

Hydraulic Systems

- Hydraulic power generation architecture and components
- Certification requirements

Flight Controls

- Architectures and components
- Safety and certification requirements

Cabin Safety

- Cabin and cargo area certification
- Cabin fire protection and crashworthiness
- Design for security

Teaching methods

Teaching methods	Yes
Lectures / tutorial	X
Collaborative learning	
Flipped classroom	
Blended learning (online and face to face)	
Learning by doing	X
Project-based	
Simulation	
Case study	X

Assessment

Written exam