AMS1 - Airworthiness & Human Factors for maintenance

From the Advanced Master AMS: E&M

(Aeronautical Maintenance and Support: Engineering & Management)

Key elements

Period: **Late January to March**

Estimated duration: **45 hours**

For whom:
recent graduates, jobseekers and experienced employees

Location:
ISAE-SUPAERO, Toulouse

Language: **English**

Highlights

- EASA regulations in practice
- Industrial expertise
- Safety culture in maintenance
- Risk management tools

This certificate provides a thorough examination of requirements of EASA Part-21, -M, -145, -147, -66 for initial, continued and continuing airworthiness, and the associated obligations of stakeholders. It will also **p**rovide participants with a deep understanding of the concepts of human factors and Safety Management System in relation to aircraft maintenance.

Learning objectives

After completing this course, participants will be able to:

- Describe the applicable EASA regulations for initial, continued and continuing airworthiness;
- Describe the EASA Part-21 maintenance requirements, and EASA Part-M/145/147/66 obligations applicable to involved stakeholders;
- Understand the scope of human factors related to human performance and limitations involved in management of safety;
- Describe a Safety Management System within an MRO environment;
- Understand and apply risk management techniques, risks models and safety investigation means.

Prerequisites

- Familiarization with air laws and airworthiness;
- Aircraft architecture knowledge;
- Aeronautical engineering background;
- Knowledge of aviation safety.

Information and registration

info.exed@isae-supaero.fr

AMS1 – Airworthiness & Human Factors for maintenance

From the Advanced Master AMS: E&M

(Aeronautical Maintenance and Support: Engineering & Management)

Course content

AMS 500 – Continuing & continued airworthiness (24h):

• **Continued airworthiness:** In-service occurrence reporting – Investigation process – Airworthiness review meeting – Airworthiness directive – Practical cases

• **Continuing airworthiness:** Context and applicable regulations – EASA Part-M (continuing airworthiness management) – EASA Part-145 (maintenance organizations) – EASA Part-147 (training organizations) – EASA Part-66 (certifying staff)

• **ETOPS/EDTO operations:** Concept, background and experience – Regulation – ETOPS approval (type design and reliability, operational) – ETOPS maintenance requirements and practices (policies, procedures, reliability program)

• **Aircraft transfer**

AMS600 – Human factors and safety management system in aeronautical maintenance (20h):

• **Human factors (HF):** SHELL model – Individual and collective human performance and limitations - Human errors – Workplace – Communication – Role of management – Organization performance and continuous improvement

• **Safety Management System (SMS):** Objectives - Regulatory framework - Main concepts - Methodology - Organization and responsibilities – MRO experience

• **Risk management techniques:** Strategies for aircraft maintenance environment – Models (bowtie, Reason, PEAR) – Techniques (investigation, Maintenance Error Decision Air, safety studies, MLOSA)

• **Safety culture promotion**

• **Case study:** evaluation of an aircraft maintenance situation

AMS1 – Airworthiness & Human Factors for maintenance

From the Advanced Master AMS: E&M

(Aeronautical Maintenance and Support: Engineering & Management)

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

AMS500

Written examination (50%) + Case studies report evaluation (50%)

AMS600

Written examination (100%)