



# **CERTIFICATE OF COMPETENCE IN AIRCRAFT MAINTENANCE AND RECYCLING**



# I) Introduction

In its mission of aeronautical development in Cameroon, the Cameroon Civil Aviation Authority (CCAA) signed a convention with the University of Yaoundé I (UY1) relating to the setting up of a partnership for training, scientific and technological research, and expertise in the fields of interest to both parties. Within this framework, the CCAA Training School and the National Advanced School of Engineering (NASE) Yaoundé, offer a professional and competitive training in aviation, attested by a certificate of competence in aircraft maintenance and recycling.

Holders of this certificate will be able to manage the continuing airworthiness and follow-up the maintenance of in-service aircraft as well as the dismantling and recycling of an end-of-life aircraft.

## Is this certificate for you?

- You want to obtain professional certificate in the aircraft airworthiness and maintenance domain.
- You want to acquire skills in the management of end-of-life aircraft (dismantling and recycling).

## Your skills

At the end of this training, you will be able to:

- Develop an aircraft maintenance programme adapted to the aircraft operation and analyse its effectiveness in relation to the type of operations;
- Ensure compliance with the aircraft maintenance programme developed within the organisation by planning the execution of the required maintenance tasks on the aircraft;
- Analyse Airworthiness Directives (ADs) and other Operational Bulletins and ensure their implementation where necessary;
- Follow up aircraft records and technical documentation;
- Ensure that maintenance tasks are carried out in accordance with the regulation and procedures as a managerial or certifying staff;
- Rule on the airworthiness of aircraft by assessing the measures taken to rectify defects which occur during operations;
- Analyse aircraft reliability in accordance with the reliability programme developed within the organisation;
- Use technologies related to the recycling and refurbishment of components from the aeronautical industry;
- Identify and select components of dismantled aircraft suitable for refurbishment;
- Spearhead the re-certification process of components from dismantled aircraft;
- Ensure proper execution of material sorting operations, shredding and thermal processes;
- Carry out analysis of the outcomes of their tasks to improve maintenance/recycling practices;
- Organise and manage the human aspects of maintenance tasks;
- Raise awareness and assist the national and international community in aeronautical environmental protection.



## Perspectives

Upon completion of the training, the student shall be competent to occupy the following positions:

- Technical staff in a Continuing Airworthiness Management Organisation.
- Technical executive staff in an Approved Aircraft Maintenance Organisation.
- Technical executive staff in an Approved Maintenance Organisation specialised in aircraft dismantling and recycling.
- Technical executive staff in a Civil Aviation Administrative Body.

They shall equally be eligible, after demonstrating the number of years of experience required by the regulations in force, to apply for a category C Aircraft Maintenance Licence.

## II) Training programme structure

### Module 1: Aircraft airframe and powerplant (04 courses)

Provides general knowledge on the aircraft, the effects of aerodynamic forces aircraft operation and performance, aircraft systems and their modes of operation. It is imperative that students have basic knowledge on the functional principles of an aircraft to properly supervise their maintenance or an eventual dismantling.

This module is made up of the following courses:

**MRA601:** Aerodynamics and flight mechanics

**MRA602:** Aircraft structure

**MRA603:** Aircraft systems

**MRA604:** Propulsion systems

### Module 2: Avionics and control systems (03 courses)

Presentation of the on-board electronic systems of an aircraft, the principles of data or information management and transmission in aviation, as well as the operation of automatic and electronic instrument systems used in aeronautics, with the aim of properly carrying out or supervising maintenance, dismantling, or recycling tasks related to these systems.

This module is made up of the following courses:

**MRA605:** Automation, digital techniques and electronic instrument systems

**MRA606:** Autoflight control systems

**MRA607:** Navigation and piloting systems

### Module 3: Workshop common techniques and practices in aviation

Provides knowledge on the technologies used in the recycling and refurbishment of aeronautical components, as well as the methods, processes and techniques used in the aircraft maintenance. It also aims to instil in the learner, the concepts of inspection and testing in a maintenance workshop, and occupational health and safety.

This module is made up of the following courses:

**MRA608:** Inspections/Testing

**MRA609:** Assembly/Disassembly

**MRA610:** Recycling and refurbishing of dismantled aircraft parts

**MRA611:** Material characterisation techniques in aeronautics

**MRA612:** Occupational Health and Safety



## Module 4: Maintenance environment (05 courses)

For a proper integration in the aviation maintenance industry, it is important to have a good mastery of the international and national aeronautical legislation, safety management systems, human factor principles, maintenance data and related tools, as well as aeronautical English which facilitates the understanding and proper usage of documentation, which is mainly written in English.

This module is subdivided into five (05) courses, namely:

**MRA613:** Technical English

**MRA614:** Human factor

**MRA615:** Maintenance data and software tools

**MRA616:** Aeronautical legislation

**MRA617:** Safety Management Systems – SMS

## Module 5: MRA618: Professional internship / End of internship report / Dissertation

Students must complete an internship in an aeronautical company or laboratory, under the supervision of a tutor from the host organisation and from the NASE Yaoundé or the CCAA. The internship concludes with the writing of a report and a defence in front of a jury.

## III) Admission

### Important Dates

Application deadline

● **31 March 2022**

### Date of entrance exam

● **15 April 2022**

### Date of commencement of training

● **02 May 2022**

### Entrance Examination Eligibility

- Hold an engineering degree in mechanical, industrial, electrical, or electronic engineering or any other equivalent degree.
- Have a certificate of English language proficiency issued by the British Teaching Centre or a valid TOEFL or IELTS certificate.

## IV) Tuition fees

Tuition fees amount to **2,000,000 CFA francs**, payable in three (03) instalments: 50% at the beginning of the training and two instalments of 25% thereafter.

