



RWANDA

CIVIL AVIATION AUTHORITY

ADVISORY CIRCULAR
RCAA-AC-PANSOPS001

TRAINING PROGRAMME FOR INSTRUMENT FLIGHT PROCEDURE DESIGNERS

1.0 Purpose

1.1 Regulation 23.050 of civil aviation requires an applicant for the grant of an instrument flight procedure service certificate to employ, contract, or otherwise engage a senior person to ensure that the quality and safety of the procedure design product are assured.

ANSP shall not engage personnel in the design or publishing of visual and instrument flight procedures for use in designated airspaces and aerodromes unless they have been approved by the Authority.

1.2 This Advisory Circular (AC) is issued to provide general information and guidance on training of personnel engaged in the design, review or amendment of visual and instrument flight procedures

2.0 References.

- 2.1 Part 23 of civil aviation regulations
- 2.2 Doc 8168 - OPS/611 Aircraft Operations;
- 2.3 Doc 9274 - AN/904 Manual on the Use of the Collision Risk Model (CRM) for ILS operations;
- 2.4 Doc 9368 - AN/911 Instrument Flight Procedure Construction Manual;
- 2.5 Doc 9906 - AN/472 Quality Assurance Manual for Flight Procedure Design;
- 2.6 Doc 8697 - Aeronautical Chart Manual;
- 2.7 ICAO Annex 4 - Aeronautical Charts;
- 2.8 Doc 9674 - AN/946 World Geodetic System 1984 (WGS-84) Manual;
- 2.9 Doc 9163 Performance Based Navigation;
- 2.10 Doc 8071 - ICAO Manual on Testing of Radio Navigation Aids;
- 2.11 ICAO; Manual on Airspace Planning Methodology for the Determination of Separation Minima Doc 9689;
- 2.12 ICAO, Global Navigation Satellite System (GNSS) Manual, Doc 9849.

3.0 Guidance and Procedures

3.1 General

- 3.1.1 Approaches and departures are the most critical phases of flight considering that the aircraft is operated in close proximity to obstacles at low speeds and in some cases in adverse weather conditions. The need to develop procedures to facilitate a safe transfer of flight from en-route to landing and departure to en-route cannot be overemphasized.
- 3.1.2 The Authority is hereby recommending a systematic approach in the provision of training to personnel engaged in procedure design in order to ensure flight safety and uniformity in both design and approval of the procedures.

3.2 Categories of personnel to be trained

- 3.2.1 The following categories of personnel are covered by this circular
 - a) Flight procedure designers
 - b) Cartographers

3.2.2 Flight check for approval requires that the procedure be flown by a competent pilot specifically for that purpose.

3.3 Requirements for training

3.3.1 The IFPD organization shall develop and implement training programme and a training plan that is commensurate to the technical competence required by its staff

3.3.2 Basic flight procedure design training

Basic flight procedure design training shall be provided to all personnel to be involved in the design, development, drawing and flight inspection. The training should provide participants with basic skills to develop non-precision approach and departure procedures using the ICAO PANS-OPS Doc 8168 criteria.

3.3.3 The Instrument Flight Procedure Design (IFPD) organization shall establish procedures to ensure that the instrument flight procedure designer is able to demonstrate a basic level of competency through initial training that includes at least the following elements—

- a) knowledge of information contained in International Civil Aviation Organization (ICAO) Document number 8168, ICAO documents and manuals pertaining to the design of instrument flight procedures as amended;
- b) enhancement of knowledge and skills in the design of procedures; and
- c) competency as outlined in the competency framework for flight procedures designers as prescribed by the Authority
- d) practical exercises in the design of procedures (OJT)

3.3.4 A typical PANS-OPS course is based on 4 to 8 weeks training, or equivalent part-time basis, given by an experienced lecturer, who is well grounded in procedure design and all aspects of PANS-OPS

3.3.5 The IFPD organization shall ensure that the IFP designer, in addition to initial training, acquires more competency through recurrent training that includes at least the following elements—

- a) knowledge about updates in ICAO provisions and other provisions pertaining to procedure design; and
- b) maintenance and enhancement of knowledge and skills in the design of procedures.

3.3.6 The IFPD organization shall ensure that new IFP designers undergo an adequate, supervised OJT.

3.3.7 Specialized training

3.3.7.1 Flight procedure design is a wide discipline and it is not practicable for an individual to cover all aspects of the subject. The IFPD organisation needs to identify individual talents and provide specialized training as follows;

- a) Precision approach procedures
- b) RNAV procedures
- c) Performance Based Navigation
- d) Quality control in flight procedure design
- e) Flight procedures inspection

3.3.8 On-the-Job Training

3.3.8.1 The IFPD organisation shall ensure that performance based OJT programmes involving designing, developing, drawing and flight inspection of procedures are conducted before any individual can be approved to carry out specified duties.

3.3.8.2 The IFPD organisation shall engage qualified OJT instructors to carry out specialized training in the field.

3.3.9 Refresher training

3.3.9.1 The technology employed in developing procedures as well as the airborne and space based system used in navigation is in a constant state of evolution. To cope with changing technology and operating procedures, it is necessary that the ANSP provide personnel with courses of instruction designed to bring knowledge and skills up to date.

3.3.9.2 Refresher courses may range from in-house to fully fledged training in specialized training organizations.

3.3.10 Recurrent training

3.3.10.1 Considering the level of activities in an organization, it might not be cost effective to establish a fully fledged flight procedure design unit. The personnel will only be called when a need to develop new procedures or review existing once is identified.

3.3.10.2 Recurrent training will be provided to ensure that the procedure designers remain current and that there is need to retrain personnel following a long period of not practicing.

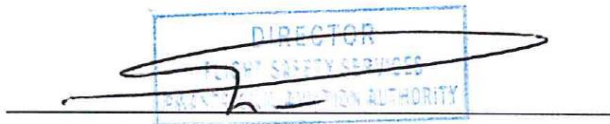
3.4 Training records

3.4.5 The IFPD organization shall ensure that training records, including OJT are properly kept for inspection by the CAA as may be required.

3.4.6 The training records shall include certificates, OJT tasks performed and any other documents related to training and approval of jobs performed.

3.5.3 The IFPD organization shall—

- (1) develop and implement training programme and a training plan that is commensurate to the technical competence required by its staff; and
- (2) maintain training records for their instrument flight procedure designers.
- (3) ensure that only designers approved by the Authority shall undertake the design, review, validation of IFPs for operational use

A blue rectangular stamp with the text "DIRECTOR", "FLIGHT SAFETY SERVICES", and "RWANDA CIVIL AVIATION AUTHORITY" is overlaid with a handwritten signature in black ink.

Director Flight Safety Services
Rwanda Civil Aviation Authority