ICAO

Doc 9868

PROCEDURES FOR AIR NAVIGATION SERVICES

Training

Third Edition, 2020

This edition incorporates all amendments approved by the Council prior to 8 June 2020 and supersedes on 5 November 2020, all previous editions of Doc 9868.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

This is a preview. Click here to purchase the full publication.

This is a preview. Click here to purchase the full publication.

ICAO

Doc 9868

PROCEDURES FOR AIR NAVIGATION SERVICES

Training

Third Edition, 2020

This edition incorporates all amendments approved by the Council prior to 8 June 2020 and supersedes on 5 November 2020, all previous editions of Doc 9868.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

This is a preview. Click here to purchase the full publication.

Published in separate English, Arabic, Chinese, French, Russian
and Spanish editions by the
INTERNATIONAL CIVIL AVIATION ORGANIZATION
999 Robert-Bourassa Boulevard, Montréal, Quebec, Canada H3C 5H7

For ordering information and for a complete listing of sales agents
and booksellers, please go to the ICAO website at www.icao.int

First edition 2006
Second edition 2016
Third edition 2020

Doc 9868, *Procedures for Air Navigation Services — Training*
Order Number: 9868
ISBN 978-92-9265-187-9

© ICAO 2020

All rights reserved. No part of this publication may be reproduced, stored in a
retrieval system or transmitted in any form or by any means, without prior
permission in writing from the International Civil Aviation Organization.

This is a preview. Click here to purchase the full publication.

AMENDMENTS

Amendments are announced in the supplements to the *Products and Services Catalogue;* the Catalogue and its supplements are available on the ICAO website at www.icao.int. The space below is provided to keep a record of such amendments.

RECORD OF AMENDMENTS AND CORRIGENDA

AMENDMENTS		
No.	Date	Entered by
1–7	Incorporated in this Edition	

CORRIGENDA		
No.	Date	Entered by

This is a preview. Click here to purchase the full publication.

This is a preview. Click here to purchase the full publication.

TABLE OF CONTENTS

Page

Foreword ..... (xi)

1. Historical background ..... (xi)
2. Scope and purpose ..... (xii)
3. Status ..... (xii)
4. Implementation ..... (xii)
5. Publication of differences ..... (xiii)
6. Contents of the document ..... (xiii)

PART I — GENERAL PROCEDURES ..... I-(i)

Chapter 1. Definitions and acronyms I-1-1

1.1 Definitions I-1-1
1.2 Acronyms I-1-6

Chapter 2. General provisions for competency-based training and assessment I-2-1

2.1 Introduction I-2-1
2.2 Principles of competency-based training and assessment I-2-1
2.3 Assumptions I-2-2
2.4 Structure of an ICAO competency framework I-2-2
2.5 Structure of adapted competency models I-2-3
2.6 Components of a competency-based training and assessment programme I-2-4
2.7 Instructional systems design I-2-5

Attachment A to Chapter 2 — General considerations related to competency-based training and assessment I-2-A-1
Attachment B to Chapter 2 — Knowledge, skills and attitudes I-2-B-1
Attachment C to Chapter 2 — Design of competency-based training and assessment I-2-C-1

Chapter 3. Course developers and qualifications of instructors I-3-1

3.1 Course developers 1-3-1
3.2 Instructor qualifications 1-3-1

This is a preview. Click here to purchase the full publication.

PART II — TRAINING AND ASSESSMENT FOR AIRCRAFT OPERATIONAL PERSONNEL ..... II-(i)

SECTION 1. Flight crew training and assessment II-1-1

Chapter 1. ICAO Competency Framework for Aeroplane Pilots II-1-1-1

1.1 Introduction II-1-1-1

Appendix 1 to Chapter 1 — ICAO competency framework to develop competency-based training and assessment for aeroplane pilot licences, ratings, and recurrent training II-1-1-App 1-1

Appendix 2 to Chapter 1 — Aeroplane pilot tasks by phases of flight II-1-1-App 2-1

Chapter 2. Competency-based training and assessment for the multi-crew pilot licence (MPL) II-1-2-1

2.1 Introduction II-1-2-1
2.2 Assessment II-1-2-1
2.3 Training II-1-2-2
2.4 MPL examiner and inspector qualifications II-1-2-2

Appendix 1 to Chapter 2 — Guidelines for the implementation of the multi-crew pilot licence II-1-2-App 1-1

Appendix 2 to Chapter 2 — Multi-crew pilot licence training scheme II-1-2-App 2-1

Attachment A to Chapter 2 — Structure of the MPL training programme II-1-2-A-1

Attachment B to Chapter 2 — Example of MPL training specifications II-1-2-B-1

Attachment C to Chapter 2 — Tasks of MPL examiners and inspectors II-1-2-C-1

Chapter 3. Evidence-based training (EBT) II-1-3-1

3.1 Applicability II-1-3-1
3.2 Background II-1-3-2
3.3 EBT instruction II-1-3-2

Chapter 4. Upset prevention and recovery training (UPRT) II-1-4-1

4.1 Applicability II-1-4-1
4.2 Background II-1-4-1
4.3 UPRT approach II-1-4-1
4.4 Regulatory requirements II-1-4-2
4.5 Training II-1-4-2
4.6 Regulatory oversight II-1-4-5

This is a preview. Click here to purchase the full publication.

Chapter 5. Competency-based training and assessment of pilots for the type rating II-1-5-1

5.1 General provisions for CBTA of pilots for the type rating II-1-5-1
5.2 Procedures for CBTA of pilots for the type rating II-1-5-1

Appendix to Chapter 5 — Guidelines for the design, development and implementation of competency-based type rating II-1-5-App-1

Chapter 6. Threat and error management (TEM) II-1-6-1

6.1 General II-1-6-1
6.2 Meeting training and licensing requirements for TEM II-1-6-1
6.3 The threat and error management (TEM) model II-1-6-1
6.4 The challenges in the TEM model II-1-6-2
6.5 Threats II-1-6-3
6.6 Errors II-1-6-4
6.7 Undesired aircraft states II-1-6-5
6.8 Countermeasures II-1-6-7

Chapter 7. The ICAO pilot instructor and evaluator competency framework II-1-7-1

7.1 Introduction II-1-7-1
7.2 ICAO pilot instructor and evaluator competency framework II-1-7-2
7.3 Tables detailing the individual competencies for instructors and evaluators (IEC1 – IEC5) II-1-7-3

Chapter 8[1]. Competency-based training and assessment for remote pilot licence (RPL) II-1-8-1

8.1 Introduction II-1-8-1
8.2 Assessment II-1-8-1
8.3 Training II-1-8-1
8.4 RPAS instructor and RPL examiner qualifications II-1-8-2

Appendix 1 to Chapter 8 — ICAO competency framework for RPL II-1-8-App 1-1

Chapter 9. Other flight crew members II-1-9-1
[Reserved]

Chapter 10. Flight validation pilots II-1-10-1
[Reserved]

[1] Within Amendment 6 to the PANS-TRG, which is applicable in 2022, Competency-based training and assessment for remote pilot licence (RPL) had a reserved Chapter 6. Amendment 7 to the PANS-TRG, applicable in 2020, will maintain Competency-based training and assessment for remote pilot licence (RPL) space reserved under Chapter 8. Therefore, at its applicability in 2022, Amendment 6 to the PANS-TRG should highlight this change.

This is a preview. Click here to purchase the full publication.

SECTION 2. Cabin crew II-2-1
[Reserved]

SECTION 3. Flight operations officer/flight dispatchers II-3-1

Chapter 1. General provisions for competency-based training and assessment for flight operations officers/flight dispatchers (FOOs) II-3-1

1.1 Introduction II-3-1-1
1.2 Training II-3-1-1
1.3 Assessment II-3-1-2
1.4 Evaluation of training programmes II-3-1-2

Appendix 1 to Chapter 1 — Guidelines for the implementation of competency-based training and assessment for FOOs II-3-1-App 1-1

Appendix 2 to Chapter 1 — ICAO competency framework for flight information officer/flight dispatcher (FOO) II-3-1-App 2-1

PART III — TRAINING AND ASSESSMENT FOR AIRCRAFT MAINTENANCE PERSONNEL ..... III-(i)

Chapter 1. Competency-based training and assessment for aircraft maintenance personnel III-1-1

1.1 Introduction III-1-1
1.2 Competency-based approach to training and assessment III-1-1
1.3 Design of competency-based training and assessment III-1-2
1.4 The competency framework III-1-2
1.5 Evaluation of training material III-1-2
1.6 Assessment III-1-3
1.7 Training and assessment material III-1-3
1.8 Evaluation of trainees III-1-4

Appendix 1 to Chapter 1 — ICAO competency framework for AMTEMs III-1-App 1-1

Appendix 2 to Chapter 1 — Guidelines for the implementation of competency-based training and assessment for aircraft maintenance personnel III-1-App 2-1

Chapter 2. Competency-based training and assessment as applicable to maintenance licences and privileges III-2-1

2.1 Introduction III-2-1
2.2 Existing aircraft maintenance licences and training programmes III-2-1
2.3 The link between competency-based training and assessment and privileges III-2-2
2.4 Issue of licences and authorizations III-2-2

This is a preview. Click here to purchase the full publication.

Chapter 3. The ICAO AMTEM developer, instructor and assessor qualification framework III-3-1
[Reserved]

PART IV — TRAINING AND ASSESSMENT FOR AIR TRAFFIC MANAGEMENT (ATM) PERSONNEL ..... IV-(i)

Chapter 1. General provisions for competency-based training and assessment for air traffic management (ATM) personnel IV-1-1

1.1 Introduction IV-1-1
1.2 Competency-based approach to training and assessment IV-1-1

Chapter 2. Competency-based training and assessment for air traffic controllers (ATCOs) IV-2-1

2.1 Introduction IV-2-1
2.2 Assessment IV-2-1
2.3 Evaluation of training programmes IV-2-1

Appendix 1 to Chapter 2 — Guidelines for the implementation of competency-based training and assessment for air traffic controllers (ATCOs) IV-2-App 1-1

Appendix 2 to Chapter 2 — ICAO competency framework for air traffic controllers IV-2-App 2-1

Chapter 3. Competency-based training and assessment for ATC on-the-job training instructors (OJTIs) IV-3-1

3.1 Introduction IV-3-1
3.2 Assessment IV-3-1
3.3 Evaluation of training programmes IV-3-1

Appendix 1 to Chapter 3 — Guidelines for the implementation of competency-based training and assessment for ATC on-the-job training instructors (OJTIs) IV-3-App 1-1

Appendix 2 to Chapter 3 — ICAO competency framework for ATC on-the-job training instructors IV-3-App 2-1

Chapter 4. Competency-based training and assessment for air traffic safety electronics personnel (ATSEP) IV-4-1

4.1 Introduction IV-4-1
4.2 Assessment IV-4-1
4.3 Training IV-4-1

Appendix 1 to Chapter 4 — Guidelines for the implementation of competency-based training and assessment for air traffic safety electronics personnel (ATSEP) IV-4-App 1-1

Appendix 2 to Chapter 4 — ICAO competency framework for air traffic safety electronics personnel IV-4-App 2-1

This is a preview. Click here to purchase the full publication.