

IALA World Wide Academy

LEVEL 2 – Technician Training

Introduction to Aids to Navigation

Module 1 Elements 1.1 to 1.2

(L2:1.1-1.2)

Edition 1

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DOCUMENT REVISIONS

Revisions to the IALA Document are to be noted in the table prior to the issue of a revised document.

Date	Page / Section Revised	Requirement for Revision

FOREWORD

The International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) recognises that training in all aspects of Aids to Navigation (AtoN) service delivery, from inception through installation and maintenance to replacement or removal at the end of a planned life-cycle, is critical to the consistent provision of that AtoN service.

Taking into account that under the SOLAS Convention, Chapter 5, Regulation 13, paragraph 2; Contracting Governments, mindful of their obligations published by the International Maritime Organisation, undertake to consider the international recommendations and guidelines when establishing aids to navigation, including recommendations on training and qualification of AtoN technicians, IALA has adopted Recommendation E-141 on Standards for Training and Certification of AtoN personnel.

IALA Committees working closely with the IALA World Wide Academy have developed a series of model courses for AtoN personnel having E-141 Level 2 technician functions. This model course on an Introduction to Aids to Navigation should be read in conjunction with the Training Overview Document IALA WWA.L2.0 which contains standard guidance for the conduct of all Level 2 model courses

This model course is intended to provide national members and other appropriate authorities charged with the provision of AtoN services with specific guidance on the training of AtoN technicians in an introduction to aids to navigation. Assistance in implementing this and other model courses may be obtained from the IALA World Wide Academy at the following address:

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1 PART A - COURSE OVERVIEW

1.1 Scope

This course is intended to provide technicians with the theoretical training necessary to have a satisfactory understanding of the types and function of marks and the lights and other aids to navigation that can be fitted to them.

This introductory course is intended to be supported by further training modules on fixed and floating aids; practical aspects of buoy handling; moorings; deployment and maintenance. Details of these supporting model courses can be found in the Level 2 Technician training overview document IALA WWA L2.0.

1.2 Objective

Upon successful completion of this course, participants will have acquired sufficient knowledge and skill to recognise the types and functions of marks and the lights and other aids to navigation fitted to them whilst on the job within their organizations.

1.3 Course Outline

This theoretical course is intended to cover the knowledge required for a technician to recognise and understand all types of marks detailed in the IALA Maritime Buoyage System (MBS) and the suite of aids to navigation that can be fitted to them. The complete course comprises 2 classroom modules, each of which deals with a specific subject covering aspects of IALA and its publications focussing on the IALA MBS.

1.4 Table of Teaching Modules

Module Title	Time in hours	Overview
IALA and the NAVGUIDE	1.5	This module describes the basic functions and types of AtoN; the role of IALA its relevance to SOLAS and introduces its AtoN manual the NAVGUIDE
The IALA Maritime Buoyage System	2.0	This module describes the background and purpose of the IALA MBS and the type and function of marks detailed therein
Evaluation	1	Written test
Total Hours:	4.5	One day course

1.5 Specific Course Related Teaching Aids

- 1 This course will be classroom based. Classrooms should be equipped with blackboards, whiteboards, and overhead projectors to enable presentation of the subject matter.
- 2 Examples of marine lanterns and other AtoN that might be fitted to marks in the region should be made available in the classroom. Models or photographs of marks should be considered as valuable teaching aids.

1.6 References

In addition to any specific references required by the Competent Authority, the following material is relevant to this course:

- IALA NAVGUIDE
- Copies of the IALA Maritime Buoyage System
- IALA Recommendation E-141 Ed.2; On Standards for Training and Certification of AtoN Personnel
- IALA Guideline 1035; Availability and Reliability of Aids to Navigation

2 PART B - TEACHING MODULES

2.1 Module 1 – IALA and the NAVGUIDE

2.1.1 Scope

This module describes the basic functions and types of AtoN; the role of IALA and its relevance to SOLAS and introduces its AtoN manual the NAVGUIDE.

2.1.2 Learning Objective

To gain a **basic** understanding of the function and types of AtoN and the role IALA plays in international standardisation.

2.1.3 Syllabus

Lesson 1 Function and Types of Aids to Navigation

- 1 Functions of Aids to Navigation
- 2 Types of Aids to Navigation
- 3 International obligations under SOLAS Chapter V

Lesson 2 IALA

- 1 The role of IALA; its World-Wide Academy and model courses
- 2 IALA Industrial members
- 3 IALA Recommendations and Guidelines
- 4 The NAVGUIDE

2.2 Module 2 – The IALA Maritime Buoyage System

2.2.1 Scope

This module describes the background and purpose of the IALA MBS and the type and function of floating and other marks detailed therein.

2.2.2 Learning Objective

To gain a **satisfactory** understanding of the background and principles of the IALA MBS; its rules; and descriptions of marks.

2.2.3 Syllabus

Lesson 1 Historical Background and Principles

- 1 Historical background
- 2 General principles
- 3 Buoyage regions A and B

Model Course Level 2 Technician Training – Introduction to AtoN IALA WWA L2:1.1-1.2

- 4 Types and function of marks including spar and small buoys
- 5 IALA MBS Rules and use of topmarks
- 6 Marking new dangers

Lesson 2 Other Marks

- 1 Leading lines/ranges
- 2 Sector lights
- 3 Lighthouses and beacons
- 4 Major floating aids
- 5 Auxiliary marks