



MODEL COURSE

C2001-1

LEVEL 2 TECHNICIAN TRAINING INTRODUCTION TO MARINE AIDS TO NAVIGATION

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DOCUMENT REVISION

Revisions to this document are to be noted in the table prior to the issue of a revised document. The latest edition of the Model Course is the only version in force unless the model course is explicitly revoked by the Council.

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FOREWORD

The International Organization for Marine Aids to Navigation (IALA) recognizes that training in all aspects of Marine 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.

Under the SOLAS Convention, Chapter 5, Regulation 13, contracting governments should undertake to take into account existing international recommendations and guidelines when establishing aids to navigation. A footnote is included referencing inter alia recommendations and guidelines of IALA.

IALA has adopted the normative Recommendation R0141 on Training and Certification of AtoN Personnel. In order to help Members of the Organization, AtoN authorities and other stakeholders worldwide to conform with the provisions of the Recommendation a series of model courses covering elements of training for AtoN personnel have been developed by the Committees and the World-Wide Academy of the Organization (WWA).

It is intended that such courses shall be conducted by a training institute or an organization accredited by a competent authority in a Member State of the Organization or Non-member State. This model course is intended to provide Members, AtoN authorities and other appropriate stakeholders with specific guidance on the training of AtoN technicians in shore marks.

PART 1- COURSE OVERVIEW

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 AtoN that can be fitted to them.

This introductory course is intended to be supported by further training modules on fixed and floating AtoN, practical aspects of buoy handling, moorings, deployment and maintenance. Details of these supporting model courses can be found in model course C2000 Level 2 Technician Training Model Course Overview.

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 AtoN fitted to them whilst on the job within their authorities, organizations or other stakeholders.

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 R1001, The IALA Maritime Buoyage System (MBS) and the suite of AtoN that can be fitted to them. The complete course comprises two classroom modules, each of which deals with a specific subject covering aspects of IALA and its publications focusing on the R1001 The IALA MBS.

4. TEACHING MODULES

Table 1 *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 and the role of IALA and its relevance to SOLAS and the NAVGUIDE
R1001 The IALA Maritime Buoyage System	1.0	This module describes the background and purpose of R1001 The IALA Maritime Buoyage System
Evaluation	0.5	Written Test
Total Hours	3.0	0.5 day course

5. SPECIFIC COURSE RELATED TO TEACHING AIDS

This course will be classroom based. Classrooms should be equipped with blackboards, whiteboards, and overhead projectors to enable presentation of the subject matter.

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

An alternative to classroom instruction would be to provide the lecture material to participants via distance-learning via the Internet. In that case, participants would need access to computers and related equipment, and should be provided with a means of interacting with instructors for discussion and to answer questions.

6. ACRONYMS

To assist in the use of this model course, the following acronyms have been used:

AtoN	Marine Aids to Navigation
IALA	International Organization for Marine Aids to Navigation
L	Level
SOLAS	International Convention for the Safety of Life at Sea, 1974 (as amended)
WWA	World-Wide Academy

7. DEFINITIONS

The definition of terms used in this Guideline can be found in the International Dictionary of Marine Aids to Navigation.

8. REFERENCES

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

- 1 IALA NAVGUIDE.
- 2 IALA Recommendation R1001 The IALA Maritime Buoyage System
- 3 IALA Recommendation R0141 Training and Certification of AtoN Personnel
- 4 IALA Guideline G1035 Availability and Reliability of AtoN

PART 2 – TEACHING MODULES

1. MODULE 1 – IALA AND THE NAVGUIDE

1.1. SCOPE

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

1.2. LEARNING OBJECTIVE

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

1.3. SYLLABUS

1.3.1. LESSON 1 – FUNCTION AND TYPES OF ATO N

- 1 Functions of AtoN
- 2 Types of AtoN
- 3 International obligations under SOLAS Chapter V

1.3.2. LESSON 2 – THE INTERNATIONAL ORGANIZATION FOR MARINE AID TO NAVIGATION (IALA)

- 1 The role of IALA, the World-Wide Academy (WWA) and the model courses
- 2 Member States, Associate and Affiliate Members of the Organization including Affiliate Industrial Members
- 3 Standards, Recommendations and Guidelines
- 4 The NAVGUIDE

2. MODULE 2 – THE IALA MARITIME BUOYAGE SYSTEM

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. LEARNING OBJECTIVE

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

2.3. SYLLABUS

2.3.1. LESSON 1 – HISTORICAL BACKGROUND AND PRINCIPLES

- 1 Historical background
- 2 General principles
- 3 Buoyage regions A and B
- 4 Types and function of marks including spar and small buoys
- 5 IALA MBS Rules and use of topmarks
- 6 Marking new dangers

2.3.2. LESSON 2 – OTHER MARKS

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