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中英对照

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国际海事组织海员行为示范
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《电子海图显示与信息系统(ECDIS)的操作使用》

翻　译：胡江强　　赵学俊

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Foreword

Since its inception the International Maritime Organization (IMO) has recognized the importance of human resources to the development of the maritime industry and has given the highest priority to assisting developing countries in enhancing their maritime training capabilities through the provision or improvement of maritime training facilities at national and regional levels.

Following the adoption of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW), as amended, IMO has developed model training courses to assist Member States in the effective implementation of the Convention and in achieving a uniform global transfer of information and guidance to enhance the skills and competence of training providers. Model courses significantly assist trainers and instructors to improve the standard and quality of their existing courses and enhance the implementation of the standards prescribed by the STCW Convention.

Furthermore, Member Governments have recognized that a comprehensive set of model courses in various fields of maritime training help to supplement the standard of instruction provided by maritime academies and allow seafarers, administrators and other technical specialists employed in maritime administrations, ports and shipping companies to improve their knowledge and enhance their skills and competence in related specialized fields.With the generous assistance of donors, IMO has developed a range of model courses in response to these generally identified needs. Model courses are updated through a regular revision process, taking into account any amendments to the requirements prescribed in IMO instruments, any technological developments in the field, and modern methodology in delivering training.

These model courses may be used by any training institution in developing training programmes to effectively implement related IMO instruments.

Koji Sekimizu

Secretary-General

前 言

国际海事组织(IMO)自成立伊始就认识到人力资源在海运业发展中的重要性,并最优先考虑通过在国家和地区层面上提供或改善培训设备来帮助发展中国家增强其海事培训能力。

在经修正的《1978 年海员培训、发证和值班标准国际公约》(STCW)通过之后,IMO 即编写了示范培训课程,以便在有效实施该公约方面以及在全球取得信息和指导的统一传播方面帮助各成员国,提升培训提供方的技能和能力。示范课程明显有助于培训师和教员改善现有课程的标准和质量,并提升了对 STCW 公约所规定标准的实施。

此外,成员国政府已经认识到,海事培训诸多领域中的一套综合性课程有助于对海事院校的授课标准加以补充,并允许海员、行政管理人员以及其他在海事行政机关、港口和航运公司工作的技术专家增长知识并提升其在相关专业领域中的技能和能力。在捐助者的慷慨帮助下,IMO 编写了一系列示范课程,以应对那些普遍被发现的需求。示范课程通过定期修订程序得以更新,同时兼顾对 IMO 文件中规定要求的任何修订、在该领域中的技术进步以及实施培训中的现代方法。

任何培训机构在制订培训计划时可以使用这些示范课程,以便有效实施 IMO 的相关文件。

关水康司

秘书长

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1.27 MODEL COURSE

Introduction

■ Purpose of the model courses

The purpose of the IMO model courses is to assist maritime training institutes and their teaching staff in organizing and introducing new training courses, or in enhancing, updating or supplementing existing training material where the quality and effectiveness of the training courses may thereby be improved.

It is not the intention of the model course program to present instructors with a rigid "teaching package" which they are expected to "follow blindly". Nor is it the intention to substitute audio-visual or "programmed" material for the instructor's presence. As in all training endeavours, the knowledge, skills and dedication of the instructor are the key components in the transfer of knowledge and skills to those being trained through IMO model course material.

Because educational systems and the cultural backgrounds of trainees in maritime subjects vary considerably from country to country, the model course material has been designed to identify the basic entry requirements and trainee target group for each course in universally applicable terms, and to specify clearly the technical content and levels of knowledge and skill necessary to meet the intent of IMO conventions and related recommendations.

■ Use of the model course

To use the model course the instructor should review the course plan and detailed syllabus, taking into account the information provided under the entry standards specified in the course framework. The actual level of knowledge and skills and the prior technical education of the trainees should be kept in mind during this review, and any areas within the detailed syllabus which may cause difficulties because of differences between the actual trainee entry level and that assumed by the course designer should be identified. To compensate for such differences, the instructor is expected to delete from the course, or reduce the emphasis on, items dealing with knowledge or skills already attained by the trainees. He should also identify any academic knowledge, skills or technical training which they may not have acquired.

By analysing the detailed syllabus and the academic knowledge required to allow training in the technical area to proceed, the instructor can design an appropriate preentry course or, alternatively, insert the elements of academic knowledge required to support the technical training elements concerned at appropriate points within the technical course.

Adjustment of the course objectives, scope and content may also be necessary if in your maritime industry the trainees completing the course are to undertake duties which differ from the course objectives specified in the model course.

Within the course plan the course designers have indicated their assessment of the time that should be allotted to each learning area. However, it must be appreciated that these allocations are arbitrary and assume that the trainees have fully met all entry requirements of the course. The instructor should therefore review these assessments and may need to re-allocate the time required to achieve each specific learning objective.

介 绍

■ 示范课程的目的

IMO示范课程的目的是协助海事培训机构及其教学人员组织和引入新的培训课程，提高、更新或补充现有的培训材料，以此改进培训课程的质量和培训效果。

本示范课程计划的意图并不是向教员呈交一个他们期望“盲目遵循”的“教学包”，其意图也不是用视听或“编排的”材料来代替教员的存在。在所有的培训努力中，知识、技能和教员的奉献是向IMO示范课程材料的受训者传授知识和技能的关键构成要素。

由于不同国家接受航海类培训的学员所处的教育体系和文化背景各不相同，所以示范课程采用通用术语设计，可以适应各课程受训目标人群的基本要求，并明确提出了需要满足的IMO有关公约及相关决议案所必需的技能的水平。

■ 示范课程的使用

为使用示范课程，教员应当审视课程计划和教学大纲细则，考虑课程框架中规定的入学标准所提供的信息。在审视过程中，应当牢记学员知识和技能的实际水准以及从前的技术教育水平，并应当识别出在教学大纲细则范围内由于学员实际入门水准与课程设计者假定的水准之间的差异，可能引起困难的任何部分。为弥补这些差异，希望教员将涉及学员已经掌握的知识和技能的项目从课程中删去或不做重视。此外，教员应当识别出学员可能还没有掌握的任何学术知识、技能或技术训练。

通过分析教学大纲细则以及技术领域培训所需的学术知识，教员可以设计出适当的预科课程，或者在技术课程中的适当处加入技术课程需要的学术知识。

如果完成该课程的学员在其所处的航海事业中要从事有别于本示范课程规定的课程目标的职责，则可能有必要调整课程的目标、范围和内容。

在课程计划中，课程设计者已经表明了其估计的、应分配给每一个学习部分的时间。但是，必须清楚的是，这些分配是主观的，并假设了学员完全符合本课程的入门要求。因此，教员应当对这些估计进行重新审视而且可能需要重新分配时间以符合每一个特定培训目标的需要。

■ Lesson plans

Having adjusted the course content to suit the trainee intake and any revision of the course objectives, the instructor should draw up lesson plans based on the detailed syllabus. The detailed syllabus contains specific references to the textbooks or teaching material proposed for use in the course. Where no adjustment has been found necessary in the learning objectives of the detailed syllabus, the lesson plans may simply consist of the detailed syllabus with keywords or other reminders added to assist the instructor in making his presentation of the material.

■ Presentation

The presentation of concepts and methodologies must be repeated in various ways until the instructor is satisfied that the trainee has attained each specified learning objective. The syllabus is laid out in learning-objective format and each objective specifies what the trainee must be able to do as the learning outcome.

■ Implementation

For the course to run smoothly and to be effective, considerable attention must be paid to the availability and use of:

- Properly qualified instructors
- Support staff
- Rooms and other spaces
- Equipment
- Textbooks, technical papers
- Other reference material

Thorough preparation is the key to successful implementation of the course. IMO has produced "Guidance on the Implementation of IMO Model Courses," which deals with this aspect in greater detail and is included as an attachment to this course.

■ 教案

如果对课程内容和课程目标做了修改,教员就应根据详细纲要编写教案。详细纲要中必须指明课程所需的教科书或教学资料。如果在详细纲要中没修改学习目标,教案可能就比较简单,有可能只包括带关键词的详细纲要或者教学上课用的一些提示词。

■ 学员展示

对于概念和方法,教员应该采用各种方式、各种角度重复讲解,直到认为学员都已达到特定学习目标为止。应该根据教学目标制定纲要,并且每个目标都应明确学员应该掌握的内容。

■ 实施

为使课程顺利进行和卓有成效,必须充分注意下列资源的获得和使用:

- 完全合格的教员
- 辅助人员
- 教室或其他场所
- 设备
- 教科书、技术论文
- 其他参考资料

充分的准备是成功实施本课程的关键。IMO已经制定了“IMO示范课程实施指南”,它更加详尽地涉及了这一方面并作为本课程的一个附件包含在本课程中。

Part A: Course Framework

■ Scope

This model course intends to provide the knowledge, skill and understanding of ECDIS and electronic charts to the thorough extent needed to safely navigate vessels whose primary means of navigation is ECDIS. The course emphasizes both the application and learning of ECDIS in a variety of underway contexts.

The course is designed to meet the STCW requirements in the use of ECDIS, as revised by the 2010 Manila Amendments, specifically as these apply to Tables A-II/1, A-II/2 and A-II/3, and also to revised guidelines pertaining to training and assessment in the operational use of ECDIS in Table B-I (paragraphs 36 through 66), assessment in navigational watchkeeping, and evaluation of competence, both in Table B-II.

It should be understood that this is a generic course which requires a structured and complementary on-board ship specific ECDIS familiarization for each shipboard ECDIS system on which the navigating officer serves.

■ Objective

Those who successfully complete this course should be able to demonstrate sufficient knowledge, skill and understanding of ECDIS navigation and electronic charts to undertake the duties of a navigational watch officer defined by STCW Code, as amended. This knowledge, skill and understanding should include Column 1 ECDIS competencies of Tables A-II, but is not limited to:

- Knowledge of the capability and limitations of ECDIS operations, and all indicated sub-topics
- Proficiency in operation, interpretation, and analysis of information obtained from ECDIS, and all indicated sub-topics
- Management of operational procedures, system files and data, and all indicated sub-topics

■ Entry Standards

It is assumed that trainees undertaking this course have accomplished some formal instruction in Terrestrial Navigation, have at minimum some familiarization with visual navigation, have accomplished a period of supervised bridge watch-keeping duties, and have prior completion of basic Radar/ARPA (MC 1.07). Trainees should also have considerable familiarization with personal computing operating systems, keyboards and mice or trackballs.

■ Course certificate, diploma or document

Documentary evidence should be issued to those who have successfully completed this course indicating that the holder has completed training in the navigational use and operation of Electronic Chart Display and Information Systems (ECDIS) based on this model course.

A部分:课程框架

■ 范围

本示范课程旨在提供，以ECDIS为主要导航手段时，为确保船舶航行安全应完全具备的知识、技能和理解,包括对ECDIS和电子海图的使用。课程重点是各种航行条件下ECDIS的学习和使用。

本课程设计满足STCW 2010马尼拉修正案关于ECDIS使用的要求，特别是适用于表A-II/1,A-II/2和A-II/3的相关内容以及修订后的准则中关于表B-I中的ECDIS操作的训练和评定（修订后的,第36段到66段)和表B-II中的航行值班和适任评估的内容。

需要注意的是,本课程只是通用课程,驾驶员还应该进行船载特定ECDIS的精通培训。

■ 目标

完成本课程的学习后,学员应掌握利用ECDIS和电子海图导航所具备的知识、技能和理解力(详见表A-II第1列),胜任STCW公约修正案规定的值班驾驶员岗位职责。其主要内容如下:

- ECDIS操作能力、局限性的知识,包括所有指出的小标题内容
- ECDIS信息的操作、理解、分析的精通,包括所有指出的小标题内容
- 操作流程、系统文件和数据的管理,包括所有指出的小标题内容

■ 入学标准

报名参加本课程学习的人员应该具备如下条件:掌握地文航海(定位、导航)的基本知识;了解视觉航海(visual navigation);在有人指导下,一定时间的驾驶台值班资历;完成了Radar/ARPA(MC 1.07)的基本训练;熟悉个人电脑操作系统、键盘和鼠标或轨迹球。

■ 课程证书、文凭或证明

课程完成后,应该颁发结业证书(Documentary evidence),证明学员已经顺利完成了基于本示范课程的电子海图显示与信息系统(ECDIS)的航海使用与操作培训。