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Guidelines for the Operation of the IHO e-Learning Center (Draft v4.5)

Unapproved draft prepared by

**Drafting guideline group of
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1 OVERVIEW

These guidelines are designed to promote smooth performance of the IHO e-Learning Center (hereinafter referred to as the “e-Learning Center”) by establishing basic matters concerning its operation. This document was prepared by the IHO e-Learning Project Team comprised of IHO Member States and by referring to documents from other international organizations and entities.

This document will define the goals of the IHO e-Learning Center, as well as the respective governance, e-learning material and its management, operation of the e-learning material, and the management of a Learning Management System (LMS). Contents deemed necessary may be continuously added in the course of operating the IHO e-Learning Center.

2 INTRODUCTION

2.1 Background

The need for e-learning to support IHO CB initiative was raised first by France at the 1st Session of the IHO Assembly in 2017. Following the submission of the proposal (Pro 3.3) for the establishment of an IHO e-Learning Center by the Republic of Korea to the 2nd Session of the IHO Assembly (A-2), the Capacity Building Sub-Committee (CBSC) established the e-Learning Project Team (PT) to start preparing for the establishment of the IHO e-Learning Center including clear guidelines in cooperation with the Republic of Korea. A-2 endorsed the activities to create the IHO e-Learning Center. These guidelines were written by the e-Learning Project Team following a comprehensive review of the experience of various IHO Member States as well as other organizations internationally.

2.2 What is e-learning?

While there are several definitions, e-learning in these guidelines which reflect the perspectives of the CBSC is defined as follows:

- e-learning is the use of electronic devices and internet technologies to deliver a variety of learning material to enable learning and improve capacities.
- e-learning is designed specifically to support distinct learning objectives through a variety of instructional strategies.
- e-learning requires active engagement and interaction by the learner to meet objectives and achieve intended outcomes (Centers for Disease Control and Prevention, 2013).¹

2.3 Why do we need e-learning?

E-learning has high potential for expanding and improving hydrographic capacity. As e-learning is not limited to time and place compared to face-to-face learning, so the

¹ Centers for Disease Control and Prevention, 2013. CDC’s E-learning Essentials: A guide for creating quality electronic learning.

Hydrographic Community can benefit from it equally. As e-learning contents, once created, can continue to be used, reused and updated, this learning method is less dependent on possible fluctuations in the budget allocated for capacity building (CB) by the IHO. IHO's limited CB Fund has difficulties in fulfilling requests for expanding face-to-face CB activities, whereas e-learning contents, once created, can continue to be used.

E-learning can provide agile adaptability to rapid technological changes in the field of hydrography. It can also be an effective countermeasure to overcome situations in which global disasters, such as the COVID-19 pandemic, hinder CB activities.

2.4 Advantages and limitations of e-learning

2.4.1 Advantages of e-learning

Teaching Efficiency

- It provides learners with opportunities for repetitive learning.
- Multimedia material produced for e-learning can also be used for face-to-face training.
- Existing learning contents can be reorganized into new courses.

Accessibility

- Learners can take courses at any time and place they want reducing the impact of time zone clashes.
- Participants can interact with the learning content and study at their own pace.
- Interactive e-learning allows global participation and collaboration amongst its users.

Economic efficiency

- Cost of transportation, food, accommodation and classrooms can be reduced compared to face-to-face education.
- Cost can be significantly saved by reusing and jointly using contents.
- As the number of students is not limited compared to face-to-face education, it is highly economical.

Opportunities throughout the global Hydrographic Community

- It provides learners with opportunities for updating their skills to achieve continuous professional development.
- At the pace they want and the development of information and communications technology.
- e-learning activities permit a reduced carbon footprint and more sustainable approach due to less travel.

2.4.2 Limitations of e-learning

Limitations of interaction

- The limitations of physical interaction between learners and lecturers can give the learners a sense of isolation.

Motivation and time management

- Learners need strong motivation and time management skills to truly benefit from

an online platform.

- Learners might lose focus and access other sites during learning and can be distracted.

E-learning material-specific limitations

- Courses with a high proportion of practical and field exercises are limited.

Digital literacy and network issues

- Lecturers and learners are expected to use computers and the LMS.
- Without a stable Internet connection, learning continuity may be difficult to achieve.

Cheating

- There are limitations in preventing fake attendance and cheating, and assessment may be less discriminative.

Copyright and security

- Copyrights of learning material and portrait rights of lecturers may be compromised from screen captures.

- There may be a threat of cyber-attack on obtaining personal details of learners & tutors; deleting or ransoming the e-learning system; and stealing material.

3 OBJECTIVES AND SCOPE OF THE GUIDELINES

3.1 Objective

The objective of these guidelines is to promote smooth performance of the IHO e-Learning Center by establishing basic matters concerning its operation.

3.2 Scope

The guidelines should be referred to when providing education and services utilizing the e-Learning Center.

4 TERMINOLOGY - GLOSSARY

Definitions of terms used in the guidelines are as follows:

“Blended learning” is a learning method that blends face-to-face and online learning.

“Curriculum” refers to the lessons and academic content taught in a specific course.

“E-learning” refers to education conducted in a virtual space using information and communications technology, and teaching-learning activities conducted online through an LMS in whole or in part.

“E-learning Center” refers to IHO online platform that hosts approved E-learning material that can be accessed via the IHO website.

“E-learning material” refers to a group of activities that involve developing educational contents, subjects and running classes to achieve educational goals in an e-learning environment.

“E-learning contents” refer to multimedia educational subjects and topics developed for e-learning or blended learning using digitally processed images, speech, sound, and images.

“Instructional design” refers to writing a storyboard to develop e-learning contents based on a subject matter expert’s manuscript.

“Learning Management System (LMS)” refers to a software application that manages students’ performance, progress, feedback, attendance, and assessment throughout their educational activities.

5 THE IHO E-LEARNING CENTER

5.1 Goal and role

The goal of the IHO e-Learning Center is to support the IHO community with e-learning to expand capacity building activities.

The e-Learning Center is a subordinate body of the IHO Capacity Building Sub-Committee (CBSC); it is responsible for e-learning related services and its role is to manage the website and LMS for the IHO in order to provide authentic opportunities to foster capacity building of IHO Member States and the global hydrographic community.

5.2 Vision

The vision is two-fold:

- To provide a stable online education environment anytime and anywhere for users; and
- To develop the skills and knowledge required to perform hydrographic work.

5.3 Mission and objective

The mission of the IHO e-Learning Center is to support the enhancement of the global hydrographic capacity, training, science, methods and technology.

The objectives of the IHO e-Learning Center are as follows:

- To centralize, manage and expand various e-learning contents in cooperation with IHO Member States;
- To provide users with skills necessary to apply lifelong learning technologies; and
- To provide training material which quality improves thanks to the continuous feedback from users.

5.4 Composition

The governance structure of e-Learning Center is composed as follows:

The **Steering Committee (SC)** to be composed by 10 people – IHO Director (1), CBSC Chair or Vice-Chair (1), Member of IBSC (1), Secretary (1), and 6 other Members; and The **Center Support Team (CST)** to be composed by one General Manager and one System Manager.

The composition of SC consists of a Chair, Vice-Chair, Members, and a Secretary. The Chair and Vice-Chair shall be elected by vote of the SC. The term of office of the Chair, Vice-Chair and Members shall be no longer than three years (preferable), renewable for one additional term.

The Secretary should be a member of the SC and shall be appointed by the CBSC.

5.5 Scope of Work

The scope of work of the e-Learning Center is as follows:

- Reporting the results of an approved education plan and operation to the Steering Committee.
- Effective operation and management of the e-learning material.
- Contact with the potential providers to try to obtain the e-learning material and contents identified as priority by the Steering Committee.
- Stable operation and quality improvement of the e-learning material.

5.6 Duty

The duties of the staff (CST) of the e-Learning Center are as follows:

The General Manager:

- Manage its overall operation.
- Present to SC and CBSC the main issues regarding e-Learning Center and a work plan to be approved.
- Operate management of curriculum, content and trainee.
- Report regularly on the establishment of the LMS and material, and cooperation between the IHO and Member States relating to the e-Learning Center to the Steering Committee.
- Operate overall e-learning material, such as analysis of the e-learning material requirements, operational test, instructional design, review and development of contents, and operation and management of the e-learning material and its contents.
- Review the processes of creating, updating, assessing, and discontinuing e-learning material.
- Endeavor to ensure that feedback is sought and received between instructors and students throughout the course.

The System Manager:

- Manage the hardware and software, ensure the security and network of the website and LMS of the e-Learning Center, monitor them, respond to emergency faults, ensure adequate and effective system backup and recovery and maintenance, and update manuals.

5.7 Location

The e-Learning Center may be established in a real country, virtual location or organization designated by the IHO and the CBSC through consultation.

6 STEERING COMMITTEE

It is an organizational body established to consult and coordinate all matters concerning the operation of its approved e-learning material and cooperate with related organizations and IHO Member States for the purpose of enhancing and increasing capacity building of the IHO and the global hydrographic community.

6.1 Scope of work

The scope of work of the SC is as follows:

- Approving the results of the education plan and operation.
- Matters concerning cooperation on e-learning.
- Matters concerning the appointment of the structure of governance and the expansion and running of human resources required by the e-Learning Center.

6.2 Duty

The duties of the SC Chair, Vice-Chair, Members, and Secretary are as follows:

- The Chair shall represent the SC and manage overall tasks of the SC.
- If the Chair is unable to carry out the duties of the office, the Vice-Chair shall act on behalf of the Chair.
- Members of the SC shall attend the SC meetings to review and decide on related matters for systematic and effective operation of the e-Learning Center.
- The Secretary shall assist the Chair and provide administrative support for the operation of the SC.

6.3 Ordinary meetings and reports

Ordinary meetings and reports of the SC are conducted as follows:

- The SC shall normally meet virtually once a year, and the Chair or CBSC may call additional meetings when considered necessary. If in person meetings are required

costs related to travel will be the responsibility of the member and their organization.

- The quorum of the meeting shall be a simple majority of the members. The SC should strive to arrive at its decisions by consensus. Matters may be put to a vote if considered necessary, with a decisive vote of the IHO Director in case of an equal number of votes.

- In some cases, when it is not possible to hold meetings, the alternative of voting by correspondence may be used.

- The SC shall report to the CBSC on the status of the operation of the e-Learning Center every year.

7 MANAGEMENT OF E-LEARNING MATERIAL

7.1 Basic matters

Basic matters for e-learning material and content development and management are as follows:

- e-learning material and contents developed in accordance with these guidelines can be used by the e-Learning Center after gaining required approval from the SC.

- Member States or organizations that wish to service e-learning material and contents shall adhere to these guidelines.

- The language of e-learning material and contents can be in the language of the provider, but English subtitles must be provided to be able to reach all Member States. French and Spanish subtitles should be considered additionally as much as possible.

- Considering the specificity of the hydrographic field activities, e-learning material requiring face-to-face education may be conducted in blended learning as per the requirements of the member state.

- All contents should be developed in internationally accepted formats that can be loaded and operated on the LMS.

- Related reference material for content development are systematically managed by the e-Learning Center.

7.2 Types of managed courses

Types of e-learning material are as follows:

- Regular course: A course that is approved by the SC and is operated periodically. A certificate of completion is issued when the completion requirements are met.

- Open course: A disclosed course that anyone can use without logging in.

- Special course: A course that consists of lectures on a particular subject at specific times, in various ways in the form of online lectures, seminars and open lectures.

7.3 Development of new e-learning material and content

The procedure for developing and operating new material and content are as follows:

- Design: Specify the purpose and objectives of a course and determine how to teach and evaluate it.
- Development: e-learning contents are developed as planned in the design phase.
- Validation: Upload the developed contents to the LMS and test them. Operational check of the contents approved at item 7.1.
- Operation: A course is available for providing quality experience to students and is operational.

7.4 Types of contents

Types of contents are as follows:

- Depending on the type of multimedia, contents can be classified as video, web page and other electronic flat files.
- Depending on the way contents progress, they can be classified into seminar, interviews, conversations (talks), practices, pictures in screens, virtual studios, presentation and slide audio, text overlays, digital editions, screencasts, live images, and XR/VR/AR types.

7.5 Review and submission of new e-Learning Material

All e-learning material shall be reviewed and tested by the e-Learning Center (CST). After that the material shall be submitted to the SC for approval before being hosted on the LMS.

The SC may examine the overall design and development method, expected effects, and qualitative level of the e-learning material.

E-learning material submitted for hosting on the e-Learning Center shall be evaluated by the relevant Working Group, where appropriate, who shall provide technical review for the SC.

7.6 Renewal and discontinuance

Renewal and discontinuance of e-learning material as follows:

The SC shall review and determine whether to renew or discontinue an e-learning material.

Member States and organizations that have provided e-learning material should

actively cooperate with the SC on its request for renewal.

The valid period of an e-learning material is three years, and the material that has passed the valid date shall be determined whether to be maintained or discontinued by review of the SC.

7.7 Copyright and intellectual property rights

7.7.1 Material and Contents Management

Copyright and intellectual property rights of the e-learning material and contents shall be managed as follows:

Copyright and intellectual property rights of the e-learning material belong to the creators of the content.

Contents operated by the e-Learning Center shall correctly display accurate source information, such as authors for all works in compliance with international copyright presentation methods.

IHO Member States or industries who developed or provided e-learning material and contents hold the copyright and intellectual property rights and are responsible for any copyright issues arising from use of those contents.

Issues on copyright and intellectual property rights required for the development of e-learning material and contents shall be addressed by the corresponding Member States or organizations.

7.7.2 Responsibilities of e-learning material providers

The standards for jointly using e-learning material and contents produced by the e-Learning Center, Member States and industries are as follows.

Member States that create and make available e-learning material can provide support for the operation by e-Learning Center.

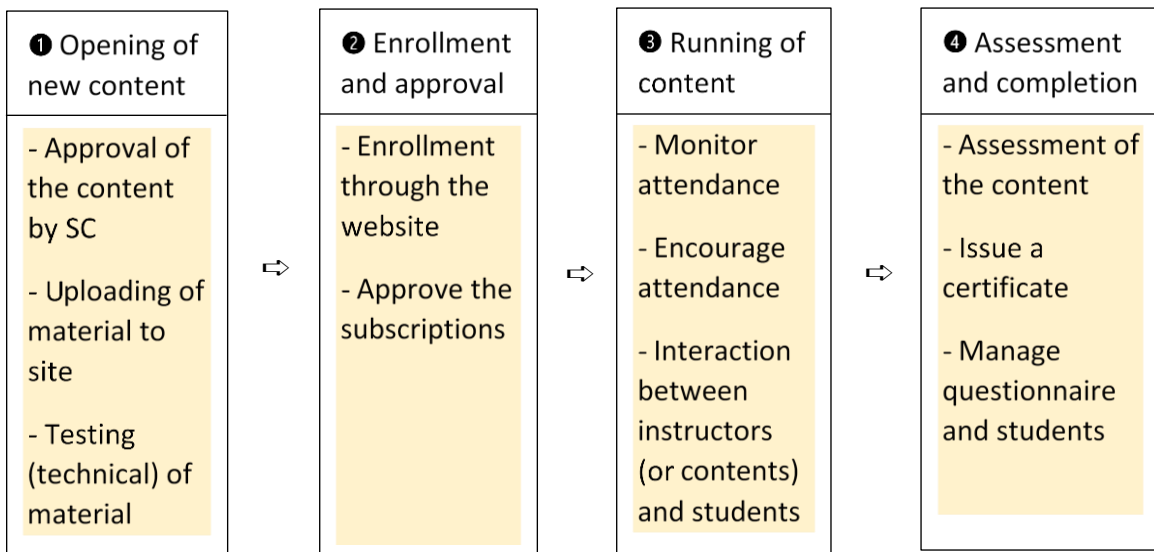
The e-learning material that IHO Member States want to share shall be reviewed by the SC and decided whether to use it or not.

Member States or organizations that provided the e-learning material should actively cooperate with inquiries about technical content and requests for improvement or updates when operating the e-learning material.

8 USE OF E-LEARNING MATERIAL BY LEARNERS

8.1 General procedure

In general, e-learning content is operated by learners according to the following steps:



Note: in the case of failure during this process, the content will be returned to the provider for retake.

8.2 Opening e-learning Content

A course may be opened after approval by the SC in consideration of the request from IHO Member States and Regional Hydrographic Commissions. However, for open courses, this process may be omitted.

8.3 Enrollment to e-learning content

The procedure for enrollment to an e-learning course and approval is as follows.

Newly created e-learning material are notified on the website and those who wish to enroll to them shall do so after creating a membership account during the enrollment period.

Those who wish to cancel their enrollment shall do so on the website.

The General Manager of the e-Learning Center shall approve enrollment applications in all circumstances.

8.4 Running of e-learning Content

The running of e-learning Content is as follows:

The General Manager should endeavor to ensure that feedback is sought and received between instructors and students throughout the course.

The General Manager shall clearly notify all students of basic information on e-Learning content, including the assessment and completion, the assessment date,

method and completion requirement.

8.5 Assessment and completion

Minimum completion criteria and testing score will be determined by the content creator.

At completion, the learner is asked to complete a survey to provide feedback for future courses, as presented in annex A, and a certificate of participation will be provided, as presented in annex B.

9 LMS MANAGEMENT AND OPERATION

9.1 Operation of website and LMS

The e-Learning Center Support Team operates its website and LMS in a stable manner.

Official meeting documents and other material related to the e-Learning Center shall be systematically managed through the website.

The e-Learning Center shall provide educational information, such as announcements and educational schedules, Member States, non-member states and industry may provide e-learning contents, the status of completion of education and training, and information on personnel in charge and operating personnel on its website.

During a course, the e-Learning Center shall respond to requests or inquiries from students in a timely manner.

9.2 Management of security and system failures

The e-Learning Center (CST) shall deliver the following measures for security and system failures:

- Thoroughly maintain system security, establish measures to prepare for emergency situations, and manage them systematically.
- Regularly inspect hardware, software and Center-related equipment and take best practice measures to prevent hacking.
- Take action in the case of system failures.
- Devise backup management and recovery measures in case of emergencies, such as network failures and suspension of operation.
- Conduct regular monitoring of network performance to analyze network usage, such as resource utilization status, analysis for delayed response time, and user trend analysis, and take measures to prevent service delays and failures.
- Perform a regular and, if possible, continuous backup of data, file systems, and

databases to prevent computer-related hazards arising from the operation of the system and to perform an early recovery in the event of an emergency.

- Periodically update the website and the system administrator manual.

Annex A

Student Feedback - Questionnaire

Thank you for participating in an e-Learning course.

Your comments are greatly appreciated.

This survey will be used to improve the course e-learning material satisfaction survey.

Please indicate honestly what you felt while participating in this course.

Please tick (V) the applicable box for each question or type in sentences.

Very Dissatisfied	Dissatisfied	Neither Satisfied or dissatisfied	Satisfied	Very Satisfied
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1. How satisfied were you with the content of the course?
2. This course helped me improve my hydrographic skills.
3. The contents of the course were organized to a level appropriate to understand.
4. The e-Learning Center supported appropriate interactions (bulletin board, chat, Q&A, etc.).
5. The Learning Management System (LMS) was convenient to use.
6. What method did you primarily use to complete this course?
PC () Mobile phone or tablet ()
7. Do you plan to participate in another e-learning course in the future?
Yes () No ()
8. If there are any improvements to make to the content of this course, please describe them.
9. If there are any improvements to make to the operation of this course, please describe them.
10. Do you have any suggestions for future courses?
11. Do you have any recommendations for improvements to the structure and organization of the IHO e-Learning Center?

Annex B

Certificate of Participation

At the completion of each course in the e-learning site, a certificate of participation will be provided in either English, French or Spanish.

		
CERTIFICATE		
This is to certify that		
[NAME OF THE TRAINEE]		
has participated in the		
[Name of the Capacity Building e-Learning Course]		
performed at IHO e-Learning Center, from [day] to [day] [month] [year]		
jointly organized by		
the International Hydrographic Organization (IHO);		
the Capacity Building Sub-Committee (CBSC); and		
the IHO e-Learning Center.		
_____ Name Director International Hydrographic Organization	_____ Name Chair Capacity Building Sub-Committee	_____ Name General Manager IHO e-Learning Center