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**DNV**

**STANDARD**

DNV-ST-0029

Edition November 2023

# **Maritime training providers**

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## FOREWORD

DNV standards contain requirements, principles and acceptance criteria for objects, personnel, organisations and/or operations.

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## CHANGES – CURRENT

This document supersedes the June 2017 edition of DNVGL-ST-0029.  
The numbering and/or title of items containing changes is highlighted in red.

### Changes November 2023

<i>Topic</i>	<i>Reference</i>	<i>Description</i>
Structure	<a href="#">Sec.1</a> , <a href="#">Sec.2</a> , <a href="#">Sec.3</a>	Updated and restructured to align with DNV format and to achieve consistency with: – <a href="#">DNV-ST-0008</a> – <a href="#">DNV-ST-0032</a> – <a href="#">DNV-ST-0049</a> – <a href="#">DNV-ST-0595</a> . Related content transferred between the various sections.
Definitions and abbreviations	<a href="#">[1.6]</a>	Updated and aligned with the other SeaSkill standards.
Suspension and withdrawal of certificates	<a href="#">[2.3.3]</a>	Updated subsection regarding conditions for suspension and withdrawal of DNV certificates.
Use of logo, public information and confidentiality	<a href="#">[2.4]</a>	Added <a href="#">[2.4.1]</a> <i>Use of certification logo</i> , <a href="#">[2.4.2]</a> <i>Public certification information</i> and <a href="#">[2.4.3]</a> <i>Confidentiality</i> to provide expectations and information.
Process control	<a href="#">[3.3]</a>	Rephrased and moved previous section 4 regarding maintenance, equipment, hazardous goods, to <a href="#">[3.3]</a> <i>Process control</i> .
Records and filing	<a href="#">[3.4.2]</a>	Expanded to include certificates issued and use of digital formats and signatures. Retention times moved to this part.
Data and information security	<a href="#">[3.4.3]</a>	Added and aligned with the other SeaSkill standards.
Special needs	<a href="#">[5.1.3]</a>	Added to cover inclusion aspect of persons with special needs.
E-learning specific addition	<a href="#">[5.3]</a>	Added requirements for training providers that design and offer e-learning.
Validation of summative examinations	<a href="#">[6.4]</a>	Added requirements regarding validation of examinations and weighting of exams.

### Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.

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# SECTION 1 GENERAL

## 1.1 Introduction

This standard gives certification requirements for organizations offering academic and/or vocational education or training leading to the issuance of certificates.

## 1.2 Objective

The objective of this standard is to provide a framework for organizations to manage their processes related to development, delivery and evaluation of learning programmes, ensuring that these are properly designed, contain clear objectives, are carried out by qualified instructors and are evaluated and improved in line with market demands and expectations.

## 1.3 Scope

This standard describes the process for certifying training providers (maritime, offshore, wind industry, shore-based).

Certification requirements for the management system and focus areas for process control are given and stipulate expectations towards management, development, maintenance and delivery of education and performance evaluation.

## 1.4 Application

This standard may be applied to organizations developing and delivering learning programmes, either in a classroom setting, in the workplace, through the use of simulators, computer based solutions or in combination.

The standard can also be used as a reference to verify if internal training related processes are properly defined and implemented.

## 1.5 References

Table 1-1 lists DNV references used in this document.

**Table 1-1 DNV references**

<i>Document code</i>	<i>Title</i>
<a href="#">DNV-ST-0008</a>	Learning programmes
<a href="#">DNV-ST-0024</a>	Competence of teaching professionals
<a href="#">DNV-ST-0033</a>	Maritime simulator systems

Table 1-2 lists other references used in this document.

**Table 1-2 Other references**

<i>Document code</i>	<i>Title</i>
IMO Model course 6.09	Training course for instructors
ISO/IEC 27001	Information technology - Security techniques - Information security management systems - Requirements

<i>Document code</i>	<i>Title</i>
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers

## 1.6 Definitions and abbreviations

### 1.6.1 Definition of verbal forms

The verbal forms defined in [Table 1-3](#) are used in this document.

**Table 1-3 Definition of verbal forms**

<i>Term</i>	<i>Definition</i>
shall	verbal form used to indicate requirements strictly to be followed in order to conform to the document
should	verbal form used to indicate that among several possibilities one is recommended as particularly suitable, without mentioning or excluding others
may	verbal form used to indicate a course of action permissible within the limits of the document

### 1.6.2 Definitions of terms

The terms defined in [Table 1-4](#) are used in this document.

**Table 1-4 Definitions of terms**

<i>Term</i>	<i>Definition</i>
academy	institution delivering extensive academic or vocational programmes resulting in a degree or license
assessment	process used to review systems, processes, documents and competence of individuals It is a generic term for testing, auditing and examining, including the conclusion.
assessor	person that performs an assessment
auditor	person competent and qualified to conduct an audit
certification requirements	set of specified requirements to be fulfilled in order to establish or maintain certification
competence	ability to apply knowledge and skills and demonstrate appropriate attitudes and behaviour to achieve an intended result in a given context
competence management	systematic approach to manage competence within an organization to ensure that strategic goals and KPIs can be met
complaint	expression of dissatisfaction by an individual or organization to another organization, related to its activities, where a response is expected
corrective action	action to eliminate the cause of a nonconformity and to prevent recurrence
curriculum	document describing the individual training activities It includes educational elements such as objectives, content, schedule, methods, lesson plans, teaching aids, evaluation and frame conditions.

<i>Term</i>	<i>Definition</i>
documented information	documents and records
documented procedure	written description of a prescribed sequence of actions for a (partial or complete) process, with clearly defined input, output and references to interlinked procedures
documented routine	activity or process in an organization which follows a regular and predictable pattern and may be substantiated by documented information
education	process to provide and develop knowledge, understanding, skills and attitudes to meet defined objectives
e-learning	organized learning activities in which the instructor and the participants are not present simultaneously at the same location The instructor and learner may or may not engage in a learning facilitation dialogue. E-learning covers both learning over the Internet and learning achieved through computer based training.
evaluation	making decisions about the quality or value of a response for the purpose of providing descriptive feedback (formative) and marks (summative)
examination	mechanism which measures a candidate's competence by one or more means, such as written, oral, practical and through observations, as defined in a certification scheme
guidance note	advice which is not mandatory, but with which DNV, in light of general experience, advises compliance
incident	undesired event that could or does result in a loss (Terms such as accidents, near misses, near-accidents, nonconformities, findings and hazardous occurrences are all covered under this definition.)
instructor	person providing education (synonym for teacher, trainer)
interested party (or stakeholder)	person, group of people or organization that may affect, be affected, or perceive itself to be affected by a decision or activity
knowledge management	systematic approach to retain knowledge within an organization to ensure continuity
learning	process of acquiring competence
learning objectives	desired learning results of the education and training The learning objectives state what a learner should be able to do after the education and training, under what condition and to what standard or criteria. The objectives should state knowledge, practical skills and attitudes, as relevant.
learning programme	combination of training methods designed and constructed to meet a single goal Synonym for course.
lesson plan	comprehensive description of each training module that ensures uniform delivery over time and by various instructors It gives descriptions on how to deliver the module, which methods to use for which part of the module, what to emphasize and how much time to spend on the sub-modules. A lesson plan must not be mistaken for a time schedule.
nonconformity	observed situation where the objective evidence indicates the non-fulfilment of a specified requirement
organization	entity, or part of a entity, to be certified



<i>Term</i>	<i>Definition</i>
policy	set of principles and related guidelines that an organization establishes to define its long-term goals, direct and limit the scope of its actions in pursuit of these goals and to protect its interests
qualification	knowledge, skill, or some other characteristic that gives a person the ability or the authorization to do or possess something
review	activity to determine the correctness, adequacy and effectiveness of a document, activity or process
simulator	machine designed to provide a realistic imitation of the controls and operation of vessel, vehicle, aircraft or other complex system, used for training and assessment purpose
simulator centre	institution using simulators to approach reality in a controlled environment Simulator centres may deliver stand-alone programmes (cargo-handling, ice navigation) but may also be a part of maritime academies. Can be on a commercial basis, as an in-house training provider or as (part of) a governmental institution.
summative assessment	assessment designed to determine if a learner has met the learning objectives and performance criteria for a learning programme
top management	those who coordinate, direct, and control an organization, who provide resources and delegate authority and can be held responsible for the success or failure of an organization
training activities	all activities organized by a training provider in order to transfer knowledge, skills or attitudes, such as courses, seminars, computer based training or self-study programmes
training centre	organization primarily delivering short training programmes or courses that are often mandatory and subject to limited validity, focusing on a specific skillset, requirement or type of equipment
training provider	institution, academy or training centre offering training leading to the issuance of certificates, diplomas or other relevant competence documentation required by an administration or other party
validation	confirmation, through provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled
verification	confirmation, through provision of objective evidence, that specified requirements are fulfilled

### 1.6.3 Abbreviations

The abbreviations described in [Table 1-5](#) are used in this document.

**Table 1-5 Abbreviations**

<i>Abbreviation</i>	<i>Description</i>
ADDIE	analysis, design, development, implementation and evaluation
GWO	Global Wind Organisation
IMCA	International Marine Contractors Association
IMO	International Maritime Organization
ISD	instructional system design

<i>Abbreviation</i>	<i>Description</i>
KPI	key performance indicator
QR	quick-response (code)

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## SECTION 2 CERTIFICATION

### 2.1 Scope of certification

#### 2.1.1 General

The certification process shall verify the existence and implementation of a management system in accordance with this standard.

Organizations complying with the requirements of this standard may receive a certificate for the relevant type of service offered. This may be, but is not limited to a (maritime or offshore) academy, training provider or simulator centre.

**Guidance note:**

For maritime or offshore training and education flag states/continental shelves may require learning programmes to be verified against a corresponding model course or other relevant standard. The standard [DNV-ST-0008](#) was developed for this purpose.

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Certification will include:

- a document review of the management system
- initial audit(s) to verify compliance
- annual audits for retention of the certificate
- a renewal audit.

#### 2.1.2 Scope definition

The scope, scope limitations and references to applicable standards or guidelines shall be agreed upon prior to the start of the certification process, including branch offices / training locations to be included. This will be the foundation for the auditing process and be reflected on a certificate to be issued.

Scope expansion during the validity period of the certificate upon request from the organization requires additional audit(s) of the new location(s) after which the certificate scope may be updated.

#### 2.1.3 Transition

Initial audits or renewal audits shall be performed against the latest edition of this standard. Organizations certified against a previous version of this standard may request to use an annual audit to make the transition to this standard. Otherwise, annual audits during the validity of the certificate will be carried out against the version of the standard corresponding with the certificate issue date.

### 2.2 Certification process

#### 2.2.1 System implementation

The management system shall have been implemented for at least three (3) months prior to the initial audit.

#### 2.2.2 Initial assessment / document review

A desktop review of the management system documentation (process descriptions, documents, online tools as applicable) shall be performed, prior to the initial or re-certification audit, to verify compliance with this standard and any additional organizational requirements needed to achieve the defined quality objectives.

The following documentation is required to perform the document review:

- scope of the management system

- quality policy
- quality objectives
- description and mapping of the organization's core and support processes, including their interrelations
- procedures for learning programme development and maintenance
- procedure for control of documented information related to the requirements of this standard
- procedure for handling nonconformities and unintentional events.
- procedure for data and information security.

Any shortcomings found during the document review shall be addressed before the initial audit can take place.

### 2.2.3 Initial audit

An initial audit shall be performed to verify if the documented management system and the implemented processes are in compliance with the standard.

The initial audit will include each branch-office in the scope of certification.

### 2.2.4 Annual audits

Annual audits of the main office(s) shall be satisfactorily completed within the three (3) month period, either side of the certificate anniversary date in order to retain certification. For annual audits of branch offices see [2.2.6].

The audit schedule shall ensure that each branch office is audited at least once during the validity of the certificate, in addition to the initial audit and renewal audit.

The organization is responsible for requesting the annual audits in time.

### 2.2.5 Renewal audits

Renewal audits and follow up shall take place within three (3) months prior to the expiry date of the certificate and cover the full scope of certification, including all branch offices.

The organization is responsible for requesting the renewal audit(s) in time.

### 2.2.6 Audit sampling

Annual audits shall also include 25% of the branch offices included in the certification scope on a sample basis, with a minimum of one.

### 2.2.7 Additional audits

If audits indicate that the management system is not effective, additional audits to verify implementation of corrective actions may be required at the discretion of DNV.

### 2.2.8 Closing audit findings / nonconformities

Any nonconformity shall be reported to the organization's management in writing.

Corrective actions to identified nonconformities shall be agreed between the different parties and closed by the organization within the agreed time frame.

In case of re-certification, nonconformities shall be closed by the organization before the expiry date of the certificate, after which a new certificate may be issued.

The organization shall document the actions and status related to the nonconformities.

## 2.3 Certificate

### 2.3.1 Certificate validity

The certificate has a validity of five (5) years and is subject to the organization complying with the requirements, to be verified during annual audits.

The certificate may be renewed following the satisfactory completion of a renewal audit.

### 2.3.2 Certificate renewal

A request for the renewal of a certificate for a management system shall be submitted to DNV at least 90 days before the current certificate expires.

### 2.3.3 Suspension and withdrawal of certificates

A certificate issued based on this standard may be suspended or withdrawn if a breach of requirements in this standard is revealed or other conditions occur that DNV finds significant.

The decision to suspend or withdraw a certificate is made by DNV and may take effect immediately or after a specified period of time. In special cases, the withdrawal of a certificate may be made with retroactive effect.

When a certificate is suspended or withdrawn DNV will inform the certificate holder and may make the information publicly available. In the case of suspension, a time limit will be given for when the certificate will be withdrawn. The certificate holder holds the responsibility to inform their customers as relevant.

## 2.4 Other

### 2.4.1 Use of certification logo

After an organization is certified against this standard, DNV will provide a certification logo and instructions for use. The logo may be used in external communication, related to this standard.

In case of withdrawal or expiry of the certificate, any reference to DNV certification shall be removed from websites, brochures, templates or any other external means of communication. The DNV logo shall in that case no longer be displayed.

### 2.4.2 Public certification information

The names of DNV certified organizations, including certificate scope and expiry dates, will be published on the DNV website unless the organization objects.

### 2.4.3 Confidentiality

Every person bound by this standard who has access to, or comes into possession of, data of a confidential nature, or data which could reasonably be deemed to be of a confidential nature, is obliged to observe the confidentiality thereof. This shall not apply if a person covered by the terms thereof is obliged to divulge data by legal regulation.

## SECTION 3 MANAGEMENT

### 3.1 Management responsibility

#### 3.1.1 Management commitment

Top management shall demonstrate accountability, leadership and commitment with respect to the quality management system, communicate the importance of its effective implementation and promote improvement. Top management shall take an active and leading role and understand its own duties in relation to the quality management system.

#### 3.1.2 Policy

Top management shall establish a written quality policy and ensure that it:

- is appropriate to the purpose of the training and educational activities
- includes a commitment to comply with requirements
- continually improve the effectiveness of the management system
- provides a framework for establishing and reviewing quality objectives
- is communicated and understood within the organization
- is reviewed for continuing adequacy.

#### 3.1.3 Goals and objectives

Top management shall ensure that quality objectives are:

- established, communicated and updated
- in alignment with the strategy and context of the organization
- measurable and consistent with the quality policy.

The arrangements needed for the achievement of these objectives shall be planned, implemented and monitored.

**Guidance note:**

Examples of measurable objectives are:

- quality of delivered programmes
- instructor performance
- level of trainees satisfaction
- passing scores/exams
- benchmarking against other training providers
- actual time spent compared to time schedules
- design of new learning programmes
- purchasing new equipment
- expansion in a new training market.

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#### 3.1.4 Continual improvement

The management system shall provide a foundation for continual improvement of all factors related to developing and delivering learning programmes, either in a classroom setting, in the workplace, through the use of simulators, computer based solutions or in combination.

### 3.1.5 Responsibilities and authority

The organization shall ensure that customer requirements are determined and met with the aim of enhancing customer satisfaction.

The organization shall identify legal, ethical, regulatory and approval requirements that apply to the operations and act in accordance with these.

The organization shall define and document the tasks, responsibility, authority and the interrelation of all personnel who manage, perform and verify work affecting the quality of the organization's activities, particularly for personnel with the responsibility for:

- resource management
- initiating action to prevent the occurrence of nonconformities
- identifying and recording deficiencies related to training
- initiating, recommending or providing solutions through designated channels
- verifying the implementation of solutions
- controlling the processes.

The organization shall determine and maintain the competence necessary to meet current needs and anticipate changes in required competence as a result of new ventures, products and markets, ensuring the ability of the organization to deliver training products and services in line with market expectations.

**Guidance note:**

Organizations may need to comply with additional (local) requirements, not specifically mentioned in this standard, e.g. occupational health, safety, and environment.

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### 3.1.6 Resources

Top management shall provide sufficient resources to implement and maintain a functioning quality management system. It shall ensure that ample resources are available and effort is put into the management system to:

- ensure that operation and control of processes are effective
- ensure availability of necessary resources/equipment for development, delivery and maintenance of learning programmes
- identify internal competence development needs
- monitor, measure and analyse the different processes
- maintain the integrity of the management system when modifications are planned and implemented
- ensure continuous improvement of the processes
- communicate quality and safety related updates and information.

### 3.1.7 Communication

Top management shall ensure that appropriate communication channels are established and that communication regarding the implementation, changes and effectiveness of the management system takes place at all relevant locations.

**Guidance note:**

Examples of communication channels are:

- notice boards
- intranet
- emails
- meetings, briefings, orientations
- internal magazines
- suggestion forms.

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### 3.1.8 Interested parties / stakeholders

The organization shall identify and document interested parties / stakeholders (e.g. authorities, customers, developers, suppliers, industry associations), including their expectations and concerns.

### 3.1.9 Risk assessment

The organization shall identify associated risks and external factors which may influence the quality of the training products and services and take measures to mitigate and manage them.

This shall include risks related to the organization and operational environment and risks related to specific learning programmes, data protection and information security as described in [3.4.3].

### 3.1.10 Incident reporting

The organization shall ensure that an active system is in place for incident reporting, investigation and follow-up. The system shall focus on identification and analysis of incidents that are related to the core processes and include:

- incident reporting
- investigation and data collection
- root cause analysis
- corrective action development
- report review and follow-up to ensure the information is complete
- corrective action implementation and follow-up.

**Guidance note:**

The purpose of the system is to reveal the basic or root causes so that corrective action can be implemented to remove or reduce the chance of recurrence and improve the management system.

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## 3.2 Management system

### 3.2.1 System implementation and maintenance

The organization shall implement and maintain a documented management system which conforms to the specified requirements.

It shall also ensure that all learning activities are transparent and compliant.



### 3.2.2 Management system scope

The scope of the organization's management system shall be maintained as documented information. Any branch office to which the certification applies shall be included in the scope of the quality management system.

### 3.2.3 System administration

The administration of the management system shall be supported by appropriate information systems with authorization and protection measures and at least cover:

- definition of required competence of administrators of the system
- identification of persons
- keeping track of issued training certificates, certificate status and assessment records
- document control
- record keeping.

### 3.2.4 Management representation

Top management shall either appoint a member in the organization or establish a functioning structure in which responsibilities and authority are assigned for:

- monitoring that management system processes are established, implemented and maintained
- reporting on the performance of the management system to the management for review and as a basis for improvement of the management system
- increasing awareness of customer requirements throughout the organization.

### 3.2.5 Management review

Top management shall review the management system at defined intervals, at least annually, to ensure its:

- continuing suitability
- adequacy
- effectiveness in satisfying the requirements of this standard
- effectiveness in satisfying the management's policy and objectives
- assessment of opportunities for improvement.

The documented reviews shall consist of well-structured and comprehensive evaluations which include, but are not limited to:

- considerations for updating the management system in relation to internal and external changes
- internal and external audit reports
- recommendations for improvement
- feedback from trainees, customers, authorities and other interested parties/stakeholders
- process performance and conformity of education and training, including nonconforming teaching and nonconforming trainees
- status of preventive and corrective actions and effectiveness
- follow-up actions from previous management reviews
- incidents, accidents and near-misses
- performance of external service providers
- adequacy of resources/equipment
- effectiveness of actions to address risks.

Output from the management review shall include decisions and actions related to:

- improvement of the effectiveness of the management system and its processes
- improvement of teaching, curriculum, equipment and facilities related to trainees and statutory requirements
- reducing risks related to health, safety and environment
- resource needs.

### 3.2.6 Internal audits

The organization shall perform internal audits to monitor the correct implementation of the management system and determine its effectiveness. The audits and follow-up actions shall be documented and records kept. Audit frequency shall be established ensuring that internal audits are at least performed annually.

An audit plan or schedule shall be established and include all areas of the management system and training organization. It shall cover the following items:

- specific areas/courses to be audited in a defined time frame
- available internal auditors
- reported nonconformities, conclusions and recommendations.

The qualifications of personnel performing internal audits shall be defined. Audits shall be carried out by qualified internal auditors who shall not be directly involved in or responsible for the area being audited.

Internal audits shall include verification if learning programmes are achieving the agreed or stated objectives, are delivered as agreed and are being adequately maintained.

The results of the audits shall be brought to the attention of the manager responsible for the area audited. Responsible management shall take timely corrective action on the deficiencies found during the audit.

### 3.2.7 Nonconformities, unintentional events and complaints

The organization shall establish documented procedures for reporting and dealing with nonconformities and unintentional events. The organization shall plan and implement a monitoring, measurement, analysis and improvement process needed to ensure conformity of the quality management system with defined standard(s).

The organization shall initiate actions to eliminate the cause of potential nonconformities in order to prevent their occurrence (preventive actions). A documented procedure shall be established to:

- determine potential nonconformities and root causes
- evaluate actions to prevent occurrence of nonconformities
- determine and implement action required
- record action taken
- review preventive action taken.

The organization shall initiate action to eliminate the root cause of nonconformities in order to prevent recurrence (corrective actions). A documented procedure shall be established to:

- review nonconformities
- investigate the root cause
- evaluate actions to prevent recurrence
- determine and implement action required
- record action taken
- review corrective action taken.

The organization shall establish effective arrangements for handling complaints. Responsibility for reviewing, handling and follow-up of complaints shall be defined. Documented information shall be kept, status and results shall be reviewed regularly and used as input for the management review.

## 3.3 Process control

### 3.3.1 Processes

Processes, including support processes, affecting the overall quality of training activities/services provided, shall be mapped including their interrelations. Documented information demonstrating process control shall be kept. The following shall be described:

- required documented procedures as defined in this standard
- how the management system is implemented and maintained
- the interaction between the processes within the organization
- how and to what extent the organization assesses and mitigates risks
- the ownership of the processes and how they are controlled (KPIs)
- how outsourced processes are controlled, e.g. outsourced courses, externally hired instructors.

### 3.3.2 Equipment and facilities

#### 3.3.2.1 Equipment

A description of the equipment that will be used during the learning programmes shall be available. This includes all equipment to be used during hands-on training, practical exercises, testing and any simulators or software programmes. If technology is an element of the learning programme the technical specifications of hardware and software provided by the manufacturer shall be included.

Any operational training equipment used shall meet operational requirements be inspected prior to use and maintained in accordance with manufacturer instructions and regulatory requirements, as applicable.

Non-operational equipment which is only used for demonstration purposes to explain functionality, gives examples or illustrates issues, may be excluded from the maintenance scheme, provided it is clearly marked as demo-equipment and/or quarantined as defective equipment.

The training provider shall provide safety equipment to learners which meets internationally accepted safety standards (if applicable).

#### 3.3.2.2 Use and maintenance of equipment

Documented routines shall be established to ensure proper use of training equipment and facilities.

**Guidance note:**

Such equipment could be:

- machinery systems
- bridge systems
- systems for loading/discharging
- fire/safety equipment
- welding equipment
- simulators
- servers
- instruments
- class rooms
- projectors.

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Procedures shall be established to ensure that:

- risks in relation to the use of training equipment and facilities are recognized
- equipment and systems are operated in a safe and efficient manner
- maintenance of equipment is planned according to manufacturer's instructions

- operators (trainees and/or instructors) of such systems are provided with, and use, relevant personal protective equipment
- work conditions are according to rules and regulations
- measuring devices which influence safety, health or environment are calibrated periodically.

Documented information of maintenance and calibration shall be kept, as applicable.

**Guidance note:**

Examples of equipment requiring calibration are:

- manometers on compressors
- oxygen meters
- gas detectors.

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### 3.3.2.3 Hazardous materials, goods and substances

Materials that pose safety, health or environmental hazards shall be identified. A documented routine shall be established and implemented for safe handling, use, storage and disposal.

**Guidance note:**

Such materials could be:

- sharps
- extinguishing agents
- diesel/lubrication oils
- tools
- pressurized cylinders
- chemicals
- welding rods.

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### 3.3.2.4 Use of simulators (as applicable)

Simulators used for training and assessment shall be suitable to reach the learning objectives and enable verification of performance against defined criteria. If an industry has defined specific criteria then these shall be adhered to.

As an example, the International Convention on Standards of Training, Certification and Watchkeeping (STCW) 1978, as amended, requires that simulators used for mandatory simulator-based training and as a means to demonstrate competence (assessment) and/or to demonstrate continued proficiency required by the same convention, shall be approved by the relevant maritime administration, see STCW Regulations I/12 and A-1/12.

**Guidance note:**

DNV-ST-0033 has formed the foundation for simulator certification for several decades. It is used to determine the adequacy, scope and quality of a simulator, both on type approval level intended for the simulator manufacturer (resulting in a statement of compliance) and, more importantly for training providers, as a product certificate, demonstrating that the simulator as installed or embedded performs adequately.

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### 3.3.2.5 Facilities

A specification of all facilities used for training shall be available. Facilities shall meet safety and construction regulations as applicable and be suitable for training delivery.

## 3.3.3 Managing changes

The organization shall have a documented routine in place to manage changes to the organization, processes and operations in a way that the quality and safety of the services are not negatively affected.

Significant changes affecting the management system shall be reported to DNV without undue delay.

## 3.4 Documented information

### 3.4.1 Document and data control procedures

The organization shall establish and maintain a documented procedure to control all documents and data related to the requirements of this standard. The structure of the documentation used in the management system shall be outlined.

The organization shall have a process in place to ensure that only approved documentation and learning material are used for learning programme delivery.

The documents and data shall be reviewed and approved for adequacy by authorised personnel prior to release. A master list or equivalent document control procedure identifying the current revision status of documents shall be established and be readily available to prevent the use of invalid and/or obsolete documents or data. The control shall ensure that:

- correct versions of appropriate documents/data are available at all relevant locations
- invalid and/or obsolete documents/data are promptly removed from all points of issue or use, or otherwise assured against unintended use
- changes to documents and data shall be reviewed and approved by the same functions that performed the original review and approval, unless specifically designated otherwise
- changes are emphasized and communicated
- up-to-date documents are available as necessary to meet requirements
- correct learning programmes are delivered consistently
- documents of external origin are identified and their distribution controlled
- documents remain legible, readily identifiable and retrievable.

Arrangements shall also include:

- clear identification of which information is controlled
- clear responsibility for its maintenance.

**Guidance note:**

Controlled documents may be:

- quality documentation
- course manuals/syllabi
- lesson plans
- examination/assessment procedures and documents
- programme information
- regulations and requirements to be met
- relevant legislation
- contracts.

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Data protection procedures shall be established and adhered to, see [\[3.4.3\]](#).

### 3.4.2 Records and filing

#### 3.4.2.1 General

Records shall be kept and maintained to provide evidence of conformity to requirements and of the effective functioning of the management system. Records shall remain legible, readily identifiable and retrievable.

The organization shall establish a documented procedure to define the controls needed for the identification, storage, protection, retrieval, retention time and disposal of records, including trainee records.

Records may be kept in any media or format (electronically, hard copies, etc.) unless specifically stated by applicable law or regulations.

**Guidance note:**

Examples of records are:

- reports from external validating bodies
- contract review records
- design review records
- nonconformities
- internal audit records
- management review records
- learning programme review records
- internal communication records
- records demonstrating process control
- approved specialist lectures or advisers.

Examples of trainee records are:

- previous experience and qualifications
- medical (self) declaration
- any information pertinent to a trainee's progress
- scores and assessment records of trainees
- issued certificates
- personal details.

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### 3.4.2.2 Issued certificates

The organization shall establish routines for the certificate generation, distribution and storing process. This applies to both classroom and online training.

The scope of the training shall be clearly indicated on the certificate. The organization shall ensure that only trainees who have successfully completed the learning programme receive a certificate.

The organization shall, based on a risk assessment, adopt appropriate measures to prevent falsification of issued certificates.

**Guidance note:**

This may be achieved through the use of e.g. special watermarks or a quick-response (QR) code to enable immediate scanning and verification to confirm if a certificate is legit.

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The organization shall be able to confirm if an issued certificate presented to third parties is legit or not. Permission to share this information shall be obtained from every trainee prior to attending the learning programme or handing over the certificate.

The organization shall therefore ensure that issued, expired and withdrawn certificates are traceable and keep a register enabling verification of validity of certificates based on:

- certificate number
- name, date of birth
- scope of training
- date of training.

Certificates may be issued in both printed format and digital format.

Certificates may be signed electronically if national legislation permits the use of electronic signatures.

### 3.4.2.3 Retention time (general)

Retention times for quality related records shall be established and regulatory requirements shall be adhered to.

### 3.4.2.4 Retention time of issued certificates

The organization shall keep issued training certificates and any documentation which formed the basis for issuing the training certificate on file during the validity period of the certificate of competence plus five years, or longer if required by national requirements.

## 3.4.2 Data and information security

The organization shall establish, implement and maintain a documented procedure for data and information security. The procedure shall include the assessment and management of information security risks and data loss. This may include, but is not limited to:

- access management
- backup process
- identification of users
- data protection, data storage and related agreements
- data exchange with customers
- criteria for the development of platform-related apps
- hacking and tampering with online training programmes or assessments
- manipulation and falsification of certificates.

**Guidance note:**

ISO/IEC 27001 is a recognized information security standard.

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## 3.4.4 Maintaining accreditations

The organization shall demonstrate the ability to monitor and maintain received accreditations, certifications and permits and take timely measures to ensure continuity.

**Guidance note:**

Examples: approvals from flag states or industry organizations, permits to operate, etc.

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## 3.4.5 Identification and traceability

The organization shall establish a documented routine for identifying programmes and programme elements during all stages of development, delivery and maintenance.

The organization shall establish suitable means to ensure traceability of trainees' progress from time of application to the examination.

**Guidance note:**

Examples of traceable documentation and data are:

- list of attendants
- who provided the training
- who performed the assessment
- date of examination.

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## 3.5 Staff competence

### 3.5.1 General

The organization shall:

- define the necessary competence for personnel performing work affecting the quality of training and education
- determine training needs of internal staff and externally hired resources
- take actions to satisfy these competence development needs
- evaluate the effectiveness of action taken
- ensure that personnel are aware of the importance of their work and how they contribute to the quality objectives.

**Guidance note:**

Competence development needs may be identified through observation and appraisal interviews. Effectiveness of actions taken can be verified through evaluation by line managers, instructors or assessors.

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### 3.5.2 Staff development

The organization shall have a mechanism in place to improve the competence of teachers, trainers or instructors, ensuring that their knowledge, understanding and skills continue to develop in line with market expectations and regulatory and technological developments.

In addition to content expertise, pedagogical competence development is a requirement for instructional staff. Trainers shall have completed a learning programme in instructional techniques or pedagogics. Records of received training or education shall be maintained.

**Guidance note:**

The standards [DNV-ST-0024](#) and IMO Model Course 6.09 Training Course for Instructors address such competencies.

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### 3.5.3 Use of externally hired resources

The organization shall ensure that the criteria, familiarization and staff development processes for own training staff are also applied to any external resource delivering training on behalf of the organization. This includes process and equipment familiarization, monitoring and evaluation of performance, pedagogical training, professional development, instructional alignment and use of approved learning programme material and lesson plans as intended by the organization.

### 3.5.4 Knowledge management

The organization shall identify and maintain the knowledge that is required for its operations and continual improvement of its processes. It shall assess risks related to the loss of knowledge and have a process in place to ensure transfer of knowledge to ensure continuity of products and services.



**Guidance note:**

Required knowledge, understanding and skills are specific to an organization. These can be acquired through (in)formal learning and experience and are critical to ensure consistent and continued delivery of products. Organizational knowledge can be developed, secured and maintained through e.g.:

- training
- experience
- lessons learned
- collected and shared knowledge and experience
- improvements in processes and products
- own intellectual property
- industry standards
- academic education and sources
- conferences
- input from the industry (customers, suppliers, industry organizations).

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## 3.6 Evaluation of suppliers

If the organization decides to outsource any of its processes, the organization remains responsible at all times and shall continue to demonstrate control over these outsourced processes. The stipulations of the organization's quality management system shall also apply to external parties performing activities or delivering a learning programme on behalf of the organization.

The organization shall evaluate and select suppliers based on their ability to supply products or services in accordance with its requirements. Criteria for selection, evaluation and re-evaluation shall be established. Records of evaluation and re-evaluation of product and service suppliers shall be maintained.

This also applies to externally hired training resources, further described under [\[3.5.3\]](#).

## 3.7 Purchasing products and services

The organization shall ensure that acquired products and services conform to specified requirements. The type and extent of control applied to the supplier / service provider and the purchased product or service may vary based on its criticality.

**Guidance note:**

Examples of products are:

- learning materials (in soft and hard copy forms)
- sub-contracted training
- sub-contracted tutors, lectures, training organizations
- external training locations
- training equipment
- maintenance.

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As part of the purchasing process, purchasing information shall clearly describe the product or service to be acquired, including where appropriate:

- technical specifications
- certification and approval requirements
- requirements for qualification of personnel
- management system requirements.

Adequacy of the specifications and requirements shall be considered before suppliers are contacted.

### 3.8 Customer property

The organization shall establish an effective arrangement for receiving, identifying, verifying, protecting and safeguarding products or data belonging to its customers while they are under the organization's control.

When a product or data is lost, damaged or otherwise found to be illegible or unaccepted, the organization shall immediately report this to the customer and retain documented information on what has occurred.

**Guidance note:**

Examples of property owned by other parties re:

- sensitive information about trainees
- licensed products, i.e. organization specific training programmes
- equipment, plans, facilities provided by customers for use in the training or learning programme development.

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## SECTION 4 DEVELOPMENT AND MAINTENANCE

### 4.1 Development of learning programmes

#### 4.1.1 General

The organization shall maintain a documented procedure for the development and maintenance of learning programmes.

Learning programmes provided by the organization shall be developed, planned, delivered and evaluated in alignment with recognized instructional system design (ISD) principles. The interrelation of the following educational elements shall be analysed:

- purpose
- learning objectives
- target group
- contents
- methods
- general conditions
- evaluation.

**Guidance note:**

A recognized instructional system design model is the ADDIE model. ADDIE is an acronym for the various phases in development of learning programmes, being analysis, design, development, implementation and evaluation.

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#### 4.1.2 Managing development of learning programmes

The organization shall plan and control the development of learning programmes. The organization shall assess the risks associated with the programme to be developed, in relation with own strategy and philosophy and feasibility.

The organization shall manage the interfaces between the different groups involved in the development to ensure effective communication and clear assignment of responsibility.

**Guidance note:**

Examples of stages in development:

- feasibility study and decision
- project plan
- establish input and output requirements
- curriculum
- course plans and descriptions
- exercise / scenario development
- teaching and learning material
- handouts
- evaluation material
- assessment material
- verification
- pilot delivery/validation
- completion and documentation.

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### 4.1.3 Input requirements learning programmes

Requirements relating to learning programmes shall be determined and records maintained. Input shall include:

- customer expectations
- functional and performance requirements
- applicable statutory and regulatory requirements
- other requirements essential for development
- qualification of developers.

The input shall be reviewed for adequacy. Requirements shall be complete, relevant, clear and not in conflict with each other.

**Guidance note:**

Examples of functional and performance requirements are:

- competence tables (STCW, IMCA, governmental, other)
- model courses (IMO, OPITO, GWO, other industries)
- IMCA guidelines
- DNV SeaSkill™ competence standards.

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### 4.1.4 Output learning programmes

Output of developed learning programmes shall:

- meet input requirements
- provide appropriate information for further design and implementation
- specify risks and safety aspects related to learning programme
- specify required resources related to the delivery of the learning programme.

Learning programmes shall be developed and delivered using a mixed variety of teaching methods and formats to increase the learning effect and promote active participation.

**Guidance note:**

The standard [DNV-ST-0008](#) provides requirements for learning programmes with respect to development, content and delivery, independent of location and training methods used.

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## 4.2 Development review

### 4.2.1 General

At suitable stages, development work shall be reviewed in accordance with an established procedure to:

- evaluate if the result so far meets the requirements and/or customer expectations
- identify any problems and propose necessary actions
- assess risks associated with the developed learning programme.

Records of the review results and corresponding actions shall be kept.

**Guidance note:**

A development review should be analytic. Critical questions should be asked, to assure that the learning programme is constructed in a logical and acceptable way. A development review covers, but is not limited to:

- curriculum
- presentations
- time tables
- hand-outs
- lesson plans.

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## 4.3 Development verification and validation

### 4.3.1 Development validation (pilot course)

A pilot course shall be performed for validation purposes to ensure that all requirements for intended use are met and the learning programme as designed is feasible, before it is released and becomes operational. Results of the pilot course validation and any necessary actions and improvements made shall be communicated with the customer and documented. The final product shall be formally approved for use by the responsible person.

### 4.3.2 Verification and approval

Verification of the final product shall be performed in accordance with an established procedure to ensure that the output meets the input requirements. Records of the result of the verification and corresponding actions shall be kept.

**Guidance note:**

This may be, but is not limited to:

- reviewing learning material prior to issue
- comparing the new learning programme with a similar proven training course or programme
- determining the adequacy of the learning environment, scenarios and resources.

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The learning programmes shall be approved prior to release.

## 4.4 Maintenance of learning programmes

### 4.4.1 Review and revision of learning programmes

The organization shall define the process and authorizations to review and revise learning programmes and associated documentation and the approval process of changes. All changes and modifications shall be identified, documented, reviewed and approved before their implementation.

Reviews shall include the following:

- changes in course or programme criteria
- applicable customer expectations, requirements or regulations
- results from evaluation reports
- feedback on trainee satisfaction
- assessment/examination results
- changes in qualification of instructional staff
- learning programme objectives in relation to obtained results

- risks and incidents in relation to the programme
- condition of learning material and training equipment.

The steps involved in revision of existing learning programmes shall follow the same documented routine as described in [4.1] to [4.3]. The organization may define when an actual revision shall be performed, based on the criticality of changes to be incorporated. Learning programmes shall at least be revised whenever a review reveals a mismatch between the programme and the expectations, demands and/or due to changes in requirements or regulations.

## SECTION 5 DELIVERY

### 5.1 Planning and responsibilities

#### 5.1.1 Planning

The organization shall plan the delivery of learning programmes, from the booking process, the process of assigning resources to the actual delivery and evaluation. All processes which affect the quality of delivery of the learning programmes shall be controlled and documented.

#### 5.1.2 Frame conditions

The maximum number of participants shall be stated for each learning programme. The training provider shall establish a documented routine for:

- registration of participants
- verifying if participants fulfil prerequisites prior to enrolling
- distribution of confirmation letters/joining instructions, including relevant information such as: programme, participant list, accommodation, deadlines, health requirements (physical/mental aspects of the programme)
- learning programme preparation.

The organization shall define the responsibility for checking the following before any learning programmes are scheduled and delivered:

- availability of competent staff
- availability of complete approved learning programme documentation (lesson plans, audio-visual aids and other support/guidance material, handouts)
- adequacy of training equipment
- adequacy of the premises/location for delivering the learning programme (class rooms, conference rooms, practice location, showers, dressing rooms, ambient noise, safety, hygiene, etc.).

#### 5.1.3 Special needs

The organization shall, within reason, provide special support to individuals with special needs. Persons with special needs can be requested to provide a formal statement of their specific needs. Based on this, the organisation shall assess which adjustments are needed and possible, taking into account the learning and performance outcomes of the learning programme or assessment.

Special needs in case of dyslexia, dyscalculia or other neurodiverse disorders may differ from person to person and can be found in a formal diagnostic assessment statement or report.

**Guidance note:**

In many countries, accommodating special needs is anchored in national law related to education. It is important to provide equal opportunities to people who may approach certain things differently or have other needs to be able to reach a certain goal.

The diagnostic assessment reports or statements mentioned above are made by certified diagnostic assessors or psychologists, specialized in learning difficulties. Since neural deviations do not change much over time such statements remain valid and may already date back to childhood.

Some examples of special needs are:

- additional time for a theoretical examination
- individual workspace
- one-to-one support
- reading out text
- text format (font size /font colour) and
- use of calculator.

It is recommended to enquire about any possible special needs ahead of time as this may affect planning and resource needs.

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## 5.2 Delivery of learning programmes

Routines shall be established for:

- delivering learning programmes, running (simulator) exercises and performing assessments
- ensuring that instructors are aligned in their approach and opinions, focus on the purpose and objectives of the learning programmes and present the contents of the learning programme and/or simulator exercise in a structured and aligned way
- ensuring that information is collected of the trainee's expectations and that these are compared to the objectives of the learning programme. Actions to align expectations shall be agreed if these do not correspond
- handling emergency situations during class activities
- ensuring that evaluation or assessment criteria are clearly defined and made known to the trainees at the start of the learning programme.

Routines shall also be established to ensure that:

- at the start of each lesson, session or exercise the trainer focuses on why the topic is important and which learning objectives shall be met
- lessons, sessions or exercises are delivered in accordance with defined time frames
- progression of the learning programme aligns with the schedule
- after each lesson, session or exercise the trainer revisits the content, aim and learning objectives and determines if learning objectives have been met.

## 5.3 E-learning specific addition

### 5.3.1 Designing e-learning

E-learning programmes provided by the organization shall be developed, planned, delivered and evaluated in alignment with recognized instructional system design (ISD) principles, see [4.1.1].

Storyboards shall be available, providing the foundation and design criteria for each e-learning module.



**Guidance note:**

A storyboard is based on the principles of instructional design. An e-learning storyboard acts as a written or visual plan for the learning programme to be created. It details everything from how you aim to reach the objectives on content level, through which methods and in which sequence. Text, graphics, interactive elements, narration and hyperlinks are included or referenced. It serves as the blueprint of the e-learning to be built accordingly.

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### 5.3.2 E-learning environment

A description of how a self-paced learning programme will be delivered utilizing e-learning, including all applicable system and other equipment requirements shall be provided. The organization shall describe what provisions have been put in place for the technical operation and technical support of the e-learning programme. Items that shall be addressed are:

- system requirements for the user to access and complete the programme
- cyber security measures
- backup procedure
- availability of user information to access the platform and navigate the e-learning
- helpdesk-function and 'forgotten password' functionality
- access to the e-learning environment for the different roles (administrator, learner, tutor/assessor)
- online assessment and tracability of results
- the certificate generation process, storage and accessibility shall be defined.

### 5.3.3 Invigilation and security

In case of e-learning or other forms of distant learning it is expected that the organization describes how it ensures that the correct person is following the e-learning course. In case of an online assessment the organization shall describe which measures are in place to ensure that the examination results reflect the competence of the registered trainee.

## SECTION 6 PERFORMANCE

### 6.1 Evaluation of organizational performance

#### 6.1.1 Quality of learning programme delivery

The organization shall ensure that a learning programme is delivered to agreed requirements and that teaching and learning activities are carried out as defined.

**Guidance note:**

Examples of how this can be done are:

- observation
- received complaints
- direct communication with trainees
- questionnaires/evaluations.

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The organization shall apply suitable methods for monitoring and, where applicable, measuring the effectiveness of learning programme delivery.

**Guidance note:**

This may be, but is not limited to:

- evaluation forms from trainees
- evaluation forms from teachers
- passing scores from tests
- internal/external audits
- competence of trainers
- progress in line with time schedules.

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#### 6.1.2 Nonconforming teaching

The organization shall establish documented routines for identifying and handling nonconforming teaching or performance of both internal staff and externally hired resources, influencing the quality of learning.

#### 6.1.3 Nonconforming examination

The organization shall establish documented routines for identifying and handling nonconforming behaviour or performance of both internal staff and externally hired resources, influencing the quality of an examination.

### 6.2 Evaluation of trainees

Documented routines shall be established for assessment and examination of trainees. The scores for academic topics and performance elements shall be leading in defining pass/fail criteria and assessing delegates.

Relative weighing of theoretical understanding and critical performance shall be considered when determining passing scores, based on criticality of the various competencies.

**Guidance note:**

The routine may include, but is not limited to:

- assessment methods
- proportioning of practical/theoretical tests
- passing level.

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## 6.3 Nonconforming trainees

The organization shall establish routines for handling trainees not performing as expected or required. The organization shall establish routines for re-examination in case a trainee fails to pass an examination.

## 6.4 Validation of summative examinations

The organization shall have a mechanism in place to validate and maintain questions used for summative assessments and for practical assignments which form part of an examination.

Theoretical examinations shall contain a weighted number of questions for each objective to be assessed. Random extraction of questions shall be done on learning objective level.

**Guidance note:**

Many assessment tools enable tagging of questions or using subfolders. Assessments can then be built by defining 'X number of questions with tag A / from subfolder A' and 'Y number of questions with tag B / from subfolder B', etc.

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## 6.5 Multiple assessments

The organization shall use unique versions of assessments/examinations to avoid repetition in case of re-examination or for those following a refresher training and assessment. For theoretical examinations shuffling the same questions and/or answers does not meet the criterion of unique examinations.

## CHANGES – HISTORIC

### June 2017 edition

Topic	Reference	Description
Rebranding to DNV	All	This document has been revised due to the rebranding of DNV GL to DNV. The following have been updated: the company name, material and certificate designations, and references to other documents in the DNV portfolio. Some of the documents referred to may not yet have been rebranded. If so, please see the relevant DNV GL document. No technical content has been changed.

### Amendments November 2021

#### Changes June 2017

- General

- The document has been slightly rephrased, renumbered and terminology has been aligned. Only content changes will be addressed below.
- Risk-based focus was introduced on various levels

- Sec.1 Application and certification

- Sec.1 [1.1.2]: Documentation to be submitted for document review added.
- Sec.1 [1.1.3]: Transition clause added.
- Sec.1 [1.2.3]: Requirement for having implemented management system for at least a period of three months added, prior to initial audit.
- Sec.1 [1.2.3] - Sec.1 [1.2.4]: Branch-offices and audit frequency added.
- Sec.1 [1.3]: Added term and abbreviation tables.

- Sec.2 Management

- Sec.2 [2.1.1]: Management commitment and accountability added.
- Sec.2 [2.1.4]: Responsibility and authority rewritten and new elements such as identification of interested parties and their expectation/concerns and assessment of risks introduced.
- Sec.2 [2.1.6]: Renamed *Management representation*, since also in the ISO 9001:2015 the strict requirement of assigning a management representative has been removed.
- Sec.2 [2.1.10]: New subsection, *Communication*, added.
- Sec.2 [2.2]: Quality manual removed as a requirement in line with ISO 9001:2015. Documented processes, documented information and documented routines are now used instead, meaning that a single manual is no longer required.
- Sec.2 [2.2.2]: New subsection, *Managing changes*, added.
- Sec.2 [2.3.3]: New subsection, *Maintaining accreditations*, added.
- Sec.2 [2.6]: Content added regarding staff performance, staff development, use of externally hired staff and non conforming teaching.
- Sec.2 [2.6.1]: New subsection, *Knowledge management*, added

- **Sec.3 Development and maintenance**

- Sec.3 [3.1]: Requirement for having a documented procedure for development and maintenance added.
- Sec.3 [3.3]: Assessing risks associated with developed learning programmes added.
- Sec.3 [3.4]: Maintenance of learning programmes (review and revision) added.
- Sec.3 [3.4.1]: Using a mixed variety of teaching methods added as a requirement.

- **Sec.4 Operations**

- Sec.4 [4.2.1]: Routine for handling emergency situations during class activities added.
- Sec.4 [4.2.3]: Hazardous materials, goods and substances added.
- Sec.4 [4.2.4]: Use of simulators, incl. STCW approval expectations, added.

- **Sec.5 Performance**

- Sec.5 [5.1.4]: Requirement for having multiple assessments added.
- Sec.5 [5.2]: New subsection, *Trainee certificates*, added.

## **April 2014 edition**

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This DNV GL document supersedes and replaces the previous legacy DNV Standard for Certification No. 3.403, December 2012.

On 12 September 2013, DNV and GL merged to form DNV GL Group. On 25 November 2013 Det Norske Veritas AS became the 100% shareholder of Germanischer Lloyd SE, the parent company of the GL Group, and on 27 November 2013 Det Norske Veritas AS, company registration number 945 748 931, changed its name to DNV GL AS. For further information, see [www.dnvgl.com](http://www.dnvgl.com). Any reference in this document to "Det Norske Veritas AS", "Det Norske Veritas", "DNV", "GL", "Germanischer Lloyd SE", "GL Group" or any other legal entity name or trading name presently owned by the DNV GL Group shall therefore also be considered a reference to "DNV GL AS".

## **Main changes**

### General

- This standard has been updated to comply with the DNV GL merger and has been updated with cross references to comply with the new numbering system.

### Sec.1 Application and Certification

- [1.2.1]: Two items have been added.

### **About DNV**

DNV is the independent expert in risk management and assurance, operating in more than 100 countries. Through its broad experience and deep expertise DNV advances safety and sustainable performance, sets industry benchmarks, and inspires and invents solutions.

Whether assessing a new ship design, optimizing the performance of a wind farm, analyzing sensor data from a gas pipeline or certifying a food company's supply chain, DNV enables its customers and their stakeholders to make critical decisions with confidence.

Driven by its purpose, to safeguard life, property, and the environment, DNV helps tackle the challenges and global transformations facing its customers and the world today and is a trusted voice for many of the world's most successful and forward-thinking companies.

## WHEN TRUST MATTER

