“The knowledge presented was of exceptional level and very informative”

Train the Trainer for Shipping Companies
4-6 April 2018, Simons Town, South Africa
MARITIME ACADEMY – CREATING PERSPECTIVES

We strongly believe that investment in training allows companies to take control of their future. Competence is built on knowledge, and this leads to greater personal and corporate success. With our increased global network and one of the broadest portfolios in the maritime industry, we are able to exploit best practices and offer you a comprehensive training programme.

We focus on safety and risks, energy efficiency and the environment, and help you to find the best solutions for your daily business as well as to become safer, smarter and greener.

Our contribution to a greener and more sustainable future

Maritime Academy’s aim is to educate, stimulate and empower personnel in shipping companies to contribute to environmentally sound shipping practices and to ensure compliance with pollution-prevention measures.

Reducing the incidence of human error and improving the safe operation of ships

Maritime Academy helps you to master the challenges of operating in a rapidly changing world and to minimise risks. With a complete range of courses covering all aspects of the risk management process – before, during and after – Maritime Academy is able to assist its clients with appropriate courses at every stage.

Keeping up with changing trends

Energy efficiency in operations is a key pillar for business success today. Maritime Academy helps to make ships in operation more eco-friendly and competitively viable.
“Great detail and time spent on regulations and laws. Outstanding trainers: knowledgeable, well informed, prepared and patient, answering all questions with great consideration.”

Approved HazMat Expert
24–27 October 2017, Barendrecht, The Netherlands
A LEADING GLOBAL TRAINING PROVIDER IN THE MARITIME INDUSTRY

- With over 120 different courses, one of the broadest portfolios in the industry
- 17 Academy managers in 15 key locations around the world serve as designated centres of expertise to provide expert training in more than 100 countries
- More than 300 trainers are dedicated to sharing their knowledge
- Global standard of excellence, complemented by highly specialised and in-depth regional knowledge
- Constant alignment of the portfolio and tailoring it to the needs of our customers and the industry in order to create value and growth for our customers
- Offer of comprehensive customised, individual or company-related training programmes
- Internationally accepted certificates

PROFESSIONAL TRAINING WITH PRACTICAL REFERENCE

- Interactive training sessions
- Proactive discussions
- Opportunities for interaction within small groups ensure an effective learning environment
- Practical applications that help attendees apply new knowledge directly within their own working environment
- Authentic case studies that enable the participants to apply what they have learned during the course and deepen their understanding of the subject matter

OUR EXPERIENCE – YOUR BENEFIT

2017
More than 800 courses conducted
with more than 7,600 international participants

88% of all participants highly recommend our courses
90% of all customers in 2017 were highly satisfied
94% of all participants are highly satisfied with our trainers

“Exactly what a DPA needs. Material includes additional related information about the DPA role!”
Designated Person Ashore (DPA) Training Course,
16–17 January 2018, Piraeus, Greece
Our new course portfolio is based around three core themes:

- Developing People
- Operating Ships
- Building Ships

These themes reflect major fields of activity in the maritime industry and our modular system is structured accordingly.

Each column within the themes represents a different category and contains several courses. All those seeking training can approach the search for a course from their own perspective.

For example, you can search directly for the technical topic or for the kind of qualification required by the learner. You will notice therefore, that some of the course titles appear more than once since they fulfil both requirements.

### How to read our modular system

- **Standard course**:
  Provides necessary background knowledge about topic

- **Advanced course**:
  Builds on existing level of knowledge about topic

- **Exam course**:
  Leads to a (required) qualification

- **Premium class**:
  Course where special conditions apply either in relation to trainer, location or equipment to run the course

- **Country**:
  Course usually available only in this country

### Competence and qualifications

- Crew and crewing
- Business skills

### Energy efficiency

- Environmental protection
- Management systems
- Regulations, surveys & inspections
- Risk and emergencies
- Safety
- Security
- Ship technology
- Ship types
- Survey simulator courses

### Class and statutory

- Design
- Offshore
- Production
- Ship types
## Developing People

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<td>Planning and Managing a Drydocking for Superintendents</td>
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<tr>
<td>Training for Assessors</td>
<td>Internal Auditor of an Integrated Management System acc. to ISO 9001, ISO 14001 and ISO 45001 for Shipping Companies</td>
<td>Negotiating Skills for Professionals</td>
</tr>
<tr>
<td>Train the Trainer for Shipping Companies</td>
<td>Superintendent Workshop - Managing day to day operations</td>
<td>Shipping Finance – Understanding and Creating New Perspectives</td>
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</table>

- MOU Superintendent Course:
  - Planning and Managing a Drydocking for Superintendents
  - Shipping Essentials for Bankers, Charterers and Ship Brokers
  - Superintendent Course
  - Training for Assessors
  - Train the Trainer for Shipping Companies

- Implementing an Integrated Management System to Handle Complexity in Shipping
  - Approved HazMat Expert
  - Company/Ship Security Officer (CSO/SSO) Training Course
  - Designated Person Ashore (DPA) Training Course
  - Internal Auditor ISM
  - Internal Auditor ISM-ISPS-MLC for Shipping Companies
  - Internal Auditor of an Integrated Management System acc. to ISO 9001, ISO 14001 and ISO 45001 for Shipping Companies

- Crew & Crewing
  - Understanding STCW, incl. Latest Amendments
  - STCW for Crewing Managers
  - Complying with the MLC 2006
  - Security Awareness Training for all Seafarers
  - Security Awareness Training for Seafarers with Designated Security Duties

- Business Skills
  - Communicating and Leading Effectively
  - Cross Cultural Working
  - HSE Leadership for Managers Course
  - Leadership and Teamwork in Shipping
  - Negotiating Skills for Professionals
  - Shipping Finance – Understanding and Creating New Perspectives
### OPERATING SHIPS

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<td>EEDI in practice - Energy Efficiency Design Index</td>
<td>Basics of a Quality Management System according to ISO 9001 for Shipping Companies</td>
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<td>Energy Efficient Operation of Ships - Masterclass</td>
<td>Basics of an Environmental Management System according to ISO 14001 for Shipping Companies</td>
<td>Asbestos - A Hidden Hazard On Board Ships</td>
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<tr>
<td>Practical Guide to Antifouling Management &amp; ISO 19030</td>
<td>Energy Management (ISO 50001) for Shipping Companies</td>
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<td>Preparing for the EU MRV Regulation</td>
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<td>Voyage Optimisation</td>
<td>Implementing an Integrated Management System to Handle Complexity in Shipping</td>
<td>Optimizing Waste Management on board - Operational and Technical Management Issues</td>
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<td>Internal Auditor ISM</td>
<td>Vessel General Permit</td>
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<td>Internal Auditor ISM-ISM-ISPS-MLC for Shipping Companies</td>
<td>Approved HazMat Expert</td>
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### Regulations, Surveys & Inspections

- Flag State Regulation
- Introduction to the Maritime Industry
- Introduction to the Offshore Industry and Dynamic Positioning
- Introduction to the System of Maritime Regulations
- The SOLAS Convention
- Hull Inspection Course
- Major IMO Convention Updates: SOLAS and MARPOL
- Singapore Navigational Audits
- PSC – Interactive Workshop
- Surveys and Certificates
- Vetting Inspections
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<td>Hull Inspection using 3D Simulator (Bulk carriers)</td>
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<td>Oil and Chemical Tankers - Technical and Operational Aspects</td>
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<td>Practical Incident Investigation and Root Cause Analysis - Methods and Tools</td>
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<td>Smart Use of Class - Explore the Benefits</td>
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<td>Practical Marine Risk Management and Management of Change</td>
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<td>Statutory Inspections - SOLAS, Load Line, MARPOL</td>
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<td>Superintendent Course - Survey Simulator Practice</td>
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<td>ISM Internal Auditor</td>
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# Building Ships

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<td>Electric General - Principles and Rules</td>
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<tr>
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<td>Hull Piping and Statutory Design</td>
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<tr>
<td>Machinery Piping and Statutory Design</td>
<td>Hull Structure and Strength - Concept and Rules</td>
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<td>System General and Statutory - Concept and Rules</td>
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<td>Integrated Software Dependent Systems (ISDS)</td>
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<td>LPG - System</td>
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<td>LNG Essential &amp; Liquefaction System</td>
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<td>NORSOK Standard - Safety/Working Environment</td>
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<td>Offshore Containers and Portable Offshore Units</td>
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<td>Offshore - Hull General</td>
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<td>Offshore Service Modules</td>
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<td>Subsea Production Systems</td>
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PUBLIC, IN-HOUSE OR TAILORED TRAINING

In-house training is the most economical way to train employees:

- A course held at your premises (e.g. at your offices, onboard one of your ships or at one of your workshops) saves your employees the time and expense of travelling to an external venue
- In-house training can be designed as a single session or as multiple sessions

If we do not have an existing course on the topic you have in mind, we will work with you to develop a special course or training programme that suits your company's specific needs.

KNOWLEDGE TRANSFER BY SKILLED EXPERTS

Our trainers are highly qualified experts with many years of practical experience:

- They are constantly updating themselves on new rules, regulations and trends in the industry
- They have a sound pedagogical background and provide their expertise and in-depth knowledge in a clear and understandable way
- During the course, they work side by side with the participants
- They are selected carefully and are regularly monitored to ensure quality

“I really improved and upgraded my knowledge in a wider perspective in case of risk analysis.”

Practical Incident Investigation and Root Cause Analysis - Methods and Tools
8 March 2018, Singapore
DEVELOPING PEOPLE
Implementing an Integrated Management System to Handle Complexity in Shipping

MOU Superintendent Course

Planning and Managing a Drydocking for Superintendents

Shipping Essentials for Bankers, Charterers and Ship Brokers

Superintendent Course

Training for Assessors

Train the Trainer for Shipping Companies
Approved HazMat Expert

Company/Ship Security Officer (CSO/SSO) Training Course

Designated Person Ashore (DPA) Training Course

Internal Auditor ISM

Internal Auditor ISM-ISPS-MLC for Shipping Companies

Internal Auditor of an Integrated Management System acc. to ISO 9001, ISO 14001 and ISO 45001 for Shipping Companies

Superintendent Workshop – Managing day to day operations
IMPLEMENTING AN INTEGRATED MANAGEMENT SYSTEM TO HANDLE COMPLEXITY IN SHIPPING

**Course Objective**
During this course, you will learn how to implement or adapt an Integrated Management System according to the latest ISO standards and in compliance with the ISM code and other business operations in the maritime industry.

**Focus Points**
- Principles of modern maritime management systems
- Integration strategy of management systems focusing on need for high quality documentation
- Methodologies of new ISO revisions since 2015
- Implementation of ISO 9001:2015 and 14001:2015 requirements in relation to the ISM code
  - Company in context with the management system’s scope and needs of interested parties
  - Leadership and commitment
  - Planning of objectives
  - Managing risks & changes
  - Processes of shipping operations
  - Performance evaluation
  - Improvement of the system
- Harmonized “seamless” certification of management systems

**Content**
The three-year transition period since the publication of the 2015 ISO standards will end in September 2018. This course will enable you to make an efficient transition from your existing management systems to the modern methodology for an integrated system. You will understand how an integrated system, based on the ISO 2015 high level structure, can be established as a powerful and efficient management tool to increase the business performance of your company. Special attention will be paid to the handling the increasing complexity of operations for a shipping company in today’s maritime business environment.

State of the art interactive teaching methods are employed during the two days to ensure that the learning is effective. During group activities, you will become familiar with suitable tools for developing and adapting management systems. You learn by practical activities how to plan an integrated management system and to develop a modern process structure. Throughout the course you are guided by our trainers who are well-experienced in implementing and auditing a variety of management systems.

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**Entry requirements**
None

**Duration**
2 days

**Who should attend**
Management representative, quality managers, designated persons, administration support staff
Course Objective
It is assumed that the target group holds significant competence prior to course, and many issues must be seen as clarifications, refreshing and updates.

Upon completion of this course, the participants should, in general terms, be able to explain the interrelation between rig owners, class societies, insurers, flag authorities, and port state authorities. They know the role of class societies; how class works and how to find related information through legacy DNV Exchange.

Practical implications of statutory regulations and important issues in Rules & Regulations to come; a practical understanding of the hull strength, stresses, corrosion and fatigue; Hull and Machinery surveillance schemes, and management systems, such as ISM and ISPS.

Focus Points
- Exchange and Class Systematics
- Machinery Surveys Arrangements
- MARPOL & SOLAS
- Hull strength
- Port State Control
- ISM & ISPS

Content
Superintendents play a critical role in rig management. Rig is increasing in sophistication and the operation of rig is getting more complex. To secure safe and efficient operations and achieve economic success, rig owners rely on superintendents. A superintendent’s ability to identify hazards, analyze risks, identify and evaluate options and take action, determines the success of the company.

The course contains MOU in Operation related topics, such as classification systematics, hull damages, machinery surveys, port state inspections, and international regulations such as MARPOL, SOLAS, ISM, etc.

The course is in English or Norwegian with group exercises and discussions.

The main purpose of the course is to help superintendents efficiently achieve compliance of applicable requirements related to class, flag state & port state.

Entry requirements
- None

Duration
- 2 days

Who should attend
- The course is aimed at personnel involved in rig management, and in particular rig owner’s superintendents.
Course Objective
Too many docking projects end with major cost overruns and delays, wasting both time and money for the shipowner. This course enables the participants to plan and manage a docking project from A to Z and re-deliver the ship on time and on budget with the right level of quality to ensure carefree future operation.

Focus Points
- Planning
- Project management and control
- Project risk management
- Cost control
- Contract
- Quality
- Safety
- Repair Specification
- Tendering
- The practical phases of a docking project
- Pitfalls
- Final invoice negotiations
- Undocking and departure
- Best practices, software tools and templates
- Practical, relevant cases

Content
Planning and managing a drydocking is very different from a superintendent’s daily work, which typically consists of juggling a myriad of urgent issues. A drydocking is a specific task conducted over a concentrated timeframe and requires a different project-based approach. This course will enable the participants to plan and manage such major projects, including how to handle the risks.

This three-day practical course starts with an introduction to drydocking as well as general project management topics. It then takes participants through the entire practical process from the planning and pre-arrival stages to the actual docking and repair. The course ends with the oft neglected task of capturing the knowledge and data generated in a post-docking report.

When things go wrong during a docking project the cause always lies with poor planning, which opens the door to technical surprises. This course therefore covers such potential surprises in detail.

Designed in close co-operation with many shipping companies, and drawing on many years of practical experience within the international shipping industry, the course is highly interactive and encourages a lively exchange of ideas and experiences for the mutual benefit of all attendees.

Entry requirements None
Duration 3 days
Who should attend Superintendents, fleet managers, senior management, officers and engineers
Course Objective
The course gives participants an overview of the technical aspects relating to ships and ship management, enabling them to understand more clearly ship particulars and associated documents, certificates and reports and to use this knowledge to make better analyses and economic assessments of ships.

Focus Points
- Understanding the main technical and commercial aspects of ships that have an impact on their market value
- Deciphering the technical descriptions used in expert evaluations and reports
- Generating a realistic, practical and financial assessment of a ship in the shipping market
- Developing a practical check list that can be used in the participant’s daily work

Content
The module provides a structured overview of the detailed technical aspects of the ship, its operation and the risks involved in the shipping market in comparison to its asset value in the industry.

The first part of the course consists of an overview of a ship’s technical system, past performance history and risks involved that relate to assessing its value. This background information will be vital for the following day where the focus is on the actual analysis of a ship’s value and the factors relating to a practical assessment.

Discussion of case studies and practical exercises with the participants are designed in such a way that the participants will learn how to analyse and use the knowledge gained in a practical manner to develop a questionnaire for evaluating investments in ships. The participants will in turn be able to train their own staff with this background knowledge of ships and their operation.

Entry requirements
None

Duration
2 days

Who should attend
Employees of banks and funding houses/ship brokers/insurance brokers/employees handling chartering of ships
Course Objective
Upon completion of this course, the participants should, in general terms, be able to explain:
- The interrelation between ship owners, class societies, insurers, flag authorities, and last but not least, port state authorities
- The role of class societies
- How class works and how to find related information using, for example, legacy DNV Exchange
- Practical implications of statutory regulations and important issues in Rules & Regulations to come
- A practical understanding of hull strength, stresses, corrosion and fatigue
- Hull and Machinery surveillance schemes
- Management systems, ISM and ISPS

Focus Points
- Exchange and Class Systematics
- Machinery Surveys Arrangements
- MARPOL & SOLAS
- Hull strength, ESP, CAS & CAP
- Port State Control
- ISM & ISPS

Content
Superintendents play a critical role in ship management. Ships are increasing in sophistication and the operation of ships is getting more complex. To secure safe and efficient operations and achieve economic success, shipping companies rely on superintendents. A superintendent's ability to identify hazards, analyze risks, identify and evaluate options and take action, determines the flow of the shipping process.

The course contains topics related to Ships in Operation, such as classification systematics, damage to hull, CAP, machinery surveys, port state inspections, and international regulations such as MARPOL, SOLAS, ISM, etc.

The course is in English or the local language with group exercises, discussions and an exam.

The main purpose of the course is to help superintendents efficiently achieve compliance of applicable requirements related to class, flag state & port state.

Entry requirements
Significant competence prior to the course, many issues must be seen as clarifications, refreshers and updates.

Duration
3 days

Who should attend
The course is aimed at personnel involved in ship management, and in particular ship owners' superintendents.
Course Objective
Those who successfully complete the course will be able to perform on board assessments as well as undertake all the responsibilities expected of assessors within their field of expertise, as per IMO Model course 1.30.

The course incorporates also important elements of the IMO Model Course 3.12.

Focus Points
- Shipboard assessment system
- Competence-based assessment
- Assessment methods
- Communication skills
- The on-board assessment process
- Reporting and feedback
- Uniformity of assessments
- Conduction of a practical assessment session (Role Play)

Content
This course aims to transfer the necessary knowledge and skills to support trainees when called upon to manage, supervise and conduct the assessment of seafarer competence in accordance with the provisions of section A-1/6 of the STCW Code and TMSA 3 – Element 3.

In order to preserve a high-quality learning environment, the number of participants for this course will be limited to 12.

This course was developed in cooperation with VENLYS Maritime Specialisation Services.

Entry requirements
Knowledge of the tasks/competences for which the assessment is to be conducted.

Duration
2 days

Who should attend
Shipping Companies: All personnel conducting assessments onboard
Course Objective
Those who successfully complete the course will be able to teach a maritime competence-based course effectively using appropriate methods and teaching aids.

Focus Points
- Training requirements of STCW, SOLAS, MARPOL, ISM and ISPS Code
- The role of the instructor and trainee
- The learning process and training phases
- Teaching aids and methods
- Conduction of a practical teaching session
- Designing and planning a training programme
- Assessment methods

Content
This course provides participants with the knowledge, skills and understanding to design, organise and deliver maritime training programmes whether conducted aboard or ashore.

It is intended as a useful introduction for maritime professionals who have never conducted training in the past or who have only limited experience as instructors. It emphasizes the application of up-to-date teaching aids and methods in a variety of contexts.

The STCW Convention requires that any person conducting training of seafarers which will lead to a certificate being issued is appropriately qualified. This course is designed to support the implementation of regulation I/6 of the STCW Convention concerning the qualifications of instructors.

The course incorporates important elements of the IMO Model Course 6.09 (Training Course for Instructors) and elements of the IMO Model Course 1.30 (on-board Assessment).

In order to preserve a high quality learning environment the number of participants is limited to 10.

Entry requirements
Knowledge of the tasks for which maritime training is to be conducted

Duration
3 days

Who should attend
Shipping Companies: Management: Techn. Director (CTO), Manag. Director (CEO); HR Manager
Inspection: Superintendent, Fleet Manager, Chief Operating Officer, CSO; Quality / ISM: Quality Manager, Internal Auditor, Designated Person; Crewing: Crewing Manager
On Board Personnel: Nautical Officers, Engineers, SSO
Yard: Management: Techn. Director (CTO), Manag. Director (CEO), HR Manager; Design: Design Manager, Engineers (Naval Architects) Production: Production Manager, Engineers
Quality: Quality Manager
Supplier (M&C): Management: Vice President, Techn. Director (CTO), Managing Director (CEO), HR Manager: Engineers: Engineers; Quality: Quality Manager
**Course Objective**
To qualify future HazMat experts who will be able to undertake a comprehensive preparation of IHM including the development of "Visual Sampling and Check Plan", the taking of samples onboard and the preparation of required documentation.

**Focus Points**
- Knowledge of relevant legislation
- Evaluation of onboard situation and preparation for onsite inspection
- Communication and software tool
- Safe working conditions
- Conduction of onboard inspections
- Taking of samples & statistics and on-site derivation from sampling plan according to unexpected situations
- Analysis of samples and interpretation of analysis results
- Preparation of reports and ship specific IHMs

**Content**
The course has been specifically developed in order to train HazMat Experts in line with the IMO Hong Kong Convention – SR/CONF/45, the EU Ship Recycling Regulation (EU SRR), which has entered into force on 30 December 2013. Moreover, it covers the related Guidelines for the Development of the Inventory of Hazardous Materials (IHM).

The course outlines the rules and regulations in respect of ship recycling including requirements for ship owners and documentation of hazardous materials for allowing safe ship dismantling activities.

Interactive case studies support the learning process during the theoretical part of the course. The practical part will take place on board a ship to help complete the aim of the course to prepare the Inventory of Hazardous Materials (IHM).

Successful participation will be verified with an examination on the fourth day and confirmed with the awarding of a DNV GL certificate.

**Entry requirements**
Previous shipping or HazMat knowledge

**Duration**
4 days

**Who should attend**
Shipping Companies: Superintendents, fleet manager, surveyors
Course Objective
Provision of internationally recognised training for qualification as:
- Company Security Officer (CSO) in accordance with the standard of competence as outlined in the Guidelines on Training and Certification for Company Security Officers issued as Annex of MSC/Circ.1154 and the IMO Model Course 3.20;
- Ship Security Officer (SSO) in accordance with the Mandatory Minimum Requirements for the Issue of Certificates of Proficiency for Ship Security Officers, set out in section A-VI/5, paragraphs 1 to 4 of the STCW 78, as amended and the IMO Model Course 3.19.

Focus Points
- Development, implementation, maintenance and supervision of Ship Security Plans
- Identification of threats and vulnerabilities and assessment of security risks
- Methods for Inspection and Monitoring of security measures on board ships
- Operation, testing and calibration of security equipment and systems
- Enhancing security awareness and vigilance of company staff (ship and shore)

Content
The course provides participants with the knowledge, understanding and proficiencies as required by STCW 78, as amended and the ISPS Code to undertake the tasks, duties and responsibilities as Company Security Officer (CSO) or Ship Security Officer (SSO). Practical case studies, exercises and videos are used to illustrate possible measures to comply with the maritime security requirements as laid down in the ISPS Code. Achievement of competencies is assessed by means of a final test.

Note:
Our course is accepted by relevant flag states but not by the British Maritime and Coastguard Agency (MCA). For MCA approved SSO or CSO training, please contact your closest Maritime Academy office. The Training Certificate is recognized by major flag States as precondition for the issuance of a Certificate of Proficiency (CoP) as Ship Security Officer.

Entry requirements
Maritime security knowledge
Participants aiming for a certificate of proficiency as ship security officer shall have approved seagoing service of not less than 12 months or appropriate seagoing service and knowledge of ship operations (STCW 78, as amended, Reg. VI/5).

Duration
3 days

Who should attend
Personnel involved in security matters coming from shipping companies (Designated Person (ashore), Company Security Officer, quality manager, operation manager, nautical- and technical superintendent and officer, internal auditor, master, Ship Security Officer) and maritime administrations/agencies, ship chartering, insurance and security companies
Course Objective
- To provide comprehensive training related to the implementation and maintenance of a company’s SMS in compliance with the requirements of the ISM Code
- This course fulfills the IMO MSC-MEPC.7/Circ.6 “Guidance on the qualification, training and experience necessary for undertaking the role of the Designated Person under the provisions of the ISM Code”

Focus Points
- Requirements of the DPA in the 21st century
- Principles of modern management systems
- Knowledge and understanding of the ISM Code
- Handling of mandatory rules and regulations
- Assessment techniques
- Technical and operational aspects of safety management
- Understanding operations of a shipping company
- Requirements for marine-related management system audits
- Ensuring effective communication with shipboard staff and shore management

Content
According to the ISM Code the Designated Person Ashore (DPA) plays a key role in the effective implementation of a Safety Management System and takes responsibility for verification and monitoring of all safety and pollution prevention activities. To comply with the ISM Code a shipping company should be able to provide documentary evidence that the DPA has received sufficient training to undertake the necessary duties.

In this course the participants will be fully prepared to assume the role of DPA. This means providing them with the knowledge, understanding and skills necessary to implement and maintain the company’s SMS as required by the ISM Code.

During the course the participants will be reminded about the background and objectives of the ISM Code and the resulting requirements for the company’s SMS from a modern management perspective. The responsibilities and authority of the DPA, possible legal exposure, as well as other potential difficulties will be explained. Advice is provided on principles and systematics of risk management and incident investigation.

Special attention is given to the importance of the human factor and good communication in safety management. Modern management concepts are presented. Activities are included to develop the capabilities of the participants in performing the duties, tasks and responsibilities of the DPA. Achievement of the required level of competence is assessed by means of a final test.

Entry requirements
- Sound experience in shipping and ship operations and good knowledge of the ISM Code

Duration
- 2 days

Who should attend
- Shipping Companies: Superintendents, quality managers, designated persons, nautical officers, engineers
Course Objective
Participants will receive a sound understanding of auditing techniques and processes as well as management of an internal auditing program. Participants will also gain an appreciation for the role and importance of internal auditing programs within the maritime industry as related to Safety and Quality Management systems.

Focus Points
- Definitions and objectives
- Safety Requirements
- Experience Feedback/ISM Implementation
- Internal Auditing Requirements
- Audit procedure and tools
- Audit conduct and techniques
- Typical problem areas
- PSC Detentions/Experience Feedback
- Questioning Techniques
- Communication Skills

Content
Effective implementation and verification of the efficiency of a (safety) management system requires periodical internal audits. The approach and scope of an audit differs widely from an inspection.

The first part of the auditing process resembles an inspection activity (verification of compliance and identification of non-conformities).

This course will provide shipping and offshore company employees with the knowledge and tools necessary for performing and managing internal auditing procedures. Verification principles and methods for implementation of both formal and informal audit procedures will be examined and applied.

Entry requirements
Knowledge of ISM Code requirements

Duration
2 days

Who should attend
Internal auditors and managers within shipping and associated companies who are responsible for determining, measuring and monitoring safety performance and any continuous improvement programs.
Individuals seeking interpretation of ISM Code requirements and knowledge of auditing principles.
Senior and junior officers onboard who are members of an audit team
Employees at P&I and Hull Clubs conducting external audits of shipping companies
Course Objective
To qualify participants as internal auditors (ISM, ISPS, MLC) enabling them to prepare and conduct internal audits/verifications within their shipping companies in accordance with accepted auditing principles. Prior knowledge of the three standards is expected.

Focus Points
- ISM/ISPS/MLC auditing requirements
- Common features and differences
- Techniques that contribute to the success of communication processes within audits
- Planning, preparation, performance, recording, reporting and follow-up of audits
- Principles and best practices of harmonized audits and verifications
- Handling of non-conformities including root cause analysis and corrective actions

Content
Effective implementation and verification of a (safety) management system requires periodical internal audits. The approach to and scope of an audit differs widely from an inspection.

The requirements for auditing the management system within companies and on board ships have highlighted the subject of competence of internal auditors.

Our course provides you with the knowledge and expertise necessary to plan and conduct combined ISM, ISPS and MLC audits and verifications. Through the use of interactive group exercises you will also improve your communication skills and thus strengthen your overall performance as an auditor.

The first part of the auditing process resembles an inspection activity (verification of compliance and identification of non-conformities). This course will provide shipping and offshore company employees with the knowledge and tools necessary for performing and managing internal auditing procedures.

Verification principles and methods for implementation of both formal and informal audit procedures will be examined and applied.

Participants will receive a sound understanding of auditing techniques and processes as well as management of an internal auditing program. They will also gain an appreciation for the role and importance of internal auditing programs within the maritime industry as related to Safety and Quality Management systems and learn about the requirements laid down in the ISO 19011 standard related to the performance of the internal audits and verifications in an integrated management system.

A written exam will test your level of achievement with respect to the learning objectives and be used as a basis to issue a certificate.

Entry requirements

Duration
2 days

Who should attend
Shipping Companies: Designated Persons (ashore), Company Security Officers, quality managers, superintendents, nautical officers, engineers
Course Objective

Focus Points
- Planning, preparing, conducting and documenting audits of an integrated management system
- Process analysis
- Identification and handling of nonconformities
- Interview techniques and awareness of social competence

Content
During this course you will learn how to use internal audits as a management tool for improving the system as well as the economics of a business. In accordance with the ISO 19011 you will be guided through the steps of an internal audit process. In addition, you will improve your communication skills in order to be able to activate and motivate your auditees for best results. Within the course, state of the art interactive learning methods are employed including case studies and role plays. During group exercises you will develop suitable audit tools, supporting the efficient handling and documenting of internal audits. You will learn how to identify nonconformities against the standards’ requirements and how to handle root cause analysis and the corrective action process.

Throughout the course you are guided by our trainers who are well-experienced in implementing and auditing of management systems within shipping companies. Thus the certification auditor perspective is also incorporated. The successful completion of the course is assessed with a final exam.

Entry requirements
Good prior knowledge of the ISM Code and at least two of the mentioned ISO standards is required

Duration
3 days

Who should attend
QHSE managers, internal auditors, employees supporting with audits
Two Postgraduate Diplomas offer academic and research expertise combined with best practice in the industry.

Postgraduate Diploma in Executive Maritime Management

The programme provides a holistic executive education for maritime managers by addressing major areas of interest. The diploma will consist of five core modules covering topics from environmental issues, to safety and quality, including human resources and leadership matters, as well as financial considerations and technical updates.

For more information visit the diploma website: www.maritime-executive-diploma.com

Postgraduate Diploma in Maritime Safety and Security

This programme is designed to help people involved in shipping operations, as well as the associated regulatory framework, develop the vital understanding of all of the aspects of safety and security required in today's complex maritime industry.

For more information visit the diploma website: www.maritime-safetyandsecurity-diploma.com
Course Objective
The ISM Code requires that all personnel involved in the company’s SMS have an adequate understanding of relevant rules, regulations, codes and guidelines. The company should ensure that all personnel have the qualifications, training and experience that may be required in support of the SMS (see MSC-MEPC.7/Circ.5).

The aim of the workshop is to provide the participants with the knowledge, understanding and proficiency necessary to fulfill the role of a superintendent.

- You will participate in a comprehensive uninterrupted training covering all the important aspects of the function of a superintendent.
- You will have the necessary knowledge, understanding and proficiency to fulfill the role of a superintendent.
- You will have a good start when changing side from ship to shore and you will be a competent member of the team.
- You will know how to apply all the tools for the effective implementation of the company’s Management Systems.
- You (and your company) will be able to provide objective evidence that you have received the required training (the Certificate).

Focus Points
- The day-to-day management of a vessel including support, maintenance, repair and dry docking
- Knowledge of how the functions of a shipping company are interrelated and work together
- The role of marine industry stakeholders and how they interface with the function of the superintendent
- Knowledge of the system of maritime regulations and implementation of legal requirements
- Performance of practical risk assessment, incident investigation, barrier analysis
- Leadership, teamwork, communication and interpersonal relationship

Content
Ships are an independent mechanical structure at the mercy of Mother nature and manned by human beings. Without the support of the shore organisation the ship cannot be safely operated for very long. It needs technical and nautical back-up, safety advice, crew support and all the necessary resources.

Generally the bulk of this support will come from the ship’s Superintendent, he/she is the direct link ashore with the Captain & Chief Engineer when assistance or advice is needed onboard in routine or emergency situations.

But the Superintendent cannot do it alone and a whole host of support will assist in the requirement to support the vessel. This support will come from a team...
within the company Marine or Nautical, Safety, Purchasing, Accounting, Insurance, Chartering, Crewing etc. and from external sources such as the Administrations, Class Societies, Consultants, Chandlers, Agents, Repair companies. Each and every shipping company will have their own systems and methods of how they want to run their operation. The smaller the company the more functions a single superintendent will have to carry out and the more complicated and complex his job becomes.

This five-day practical course starts with a basic introduction to the role of a superintendent within the organisation of a shipping company and the interrelation of the company with other stakeholders in the shipping industry. Day two focuses on shipping regulations and the regime of surveys and certificates. Relevant flag and port State obligations as well as environmental issues affecting the work of a superintendent are discussed. Management systems used in the shipping industry and the related codes and standards are the topics for day three. Assessment and verification techniques are explained. Day four deals with crewing matters covering the legal and management requirements for crewing the vessel. The second half concentrates on ships in emergencies, accidents, casualties and their investigation and measures to minimize risks.

The last day deals with the usual tasks of a superintendent in the day-to-day operation of the vessel including maintenance and cost control. Case studies promote an interactive approach in the conduction of the course.

**Entry requirements**  
Sea-going experience as an officer/engineer or shore experience in ship management/operation

**Duration**  
5 days

**Who should attend**  
Shipping Companies: Superintendents, tech. assistants, officers and engineers, shore managers; Others: Consultants, personnel of state owned companies operating ships
CREW AND CREWING
Understanding STCW, incl. Latest Amendments

STCW for Crewing Managers

Complying with the MLC 2006

Security Awareness Training for all Seafarers

Security Awareness Training for Seafarers with Designated Security Duties
Course Objective
Participants will improve their knowledge of the International Convention on Standards of Training, Certification and Watchkeeping (STCW) and gain the theoretical background and skills to implement the requirements and ensure compliance.

Focus Points
- Introduction to the chapters of the STCW convention and the Code
- Manila Amendments of 2010 to STCW Convention and Code
- Certificates arising from STCW
- Relationship between STCW, MLC and ISM
- IMO provisions of safe Manning of ships
- Preparation for flag State and Port State inspections

Content
Within this course the background and general goals of the STCW Convention and Code are presented in detail. The aim of STCW is to ensure that seafarers trained and certified under its regime can meet the challenges that the shipping industry will be facing in the future.

Course participants will become familiar with the structure and practical applications of the convention. The practical implications of the STCW's requirements will be better understood.

Using practical case studies the participants will learn how to achieve compliance within a management system and, using the accompanying tools, ensure the implementation of the requirements during daily work routines.

The course features a lot of group work in which the participants can practice with the received input, work out the necessary contents and receive direct feedback on possible solutions.

Entry requirements
Basic knowledge of shipping

Duration
1 day

Who should attend
Shipping Companies: Crewing superintendents, quality managers, designated persons, crewing managers, nautical officers, engineers, assistants (crewing)
MARITIME ACADEMY

STCW FOR CREWING MANAGERS

Course Objective
Participants who already have a basic knowledge about the Standards for Training and Certification Convention (STCW), as amended, will gain a deeper understanding of it from a crewing perspective. At the end of the course participants will be able to identify required certificates by rank as well as other implications arising of the STCW Convention and Code. In addition both general and specific training and familiarisation requirements for seafarers will be identified and discussed.

Focus Points
- Brief review of STCW Structure
- Terms and definitions used in STCW
- Relationship to other Conventions and Codes
- Changes due to Manila Amendments 2010
- Requirements for certification
- Certificates per rank according STCW
- Competence requirements
- Training requirements
- Ship type specific training and certification
- Familiarization requirements

Content
This module reflects the tasks and responsibilities of personnel management in shipping companies and crewing agencies who need to have a deep understanding of the training and certification requirements of the seafarers employed in order to choose the best qualified personnel. This objective is achieved by exploring and discussing the detailed requirements of STCW. Firstly the requirements sorted by rank will come under close examination. The training contents and the resulting certificates will be evaluated in more detail. Then some more general questions relating to familiarisation and training on board will also be raised and clarified. This course includes practical case studies and interactive exercises to achieve the desired learning outcome for the participants.

Entry requirements
Previous attendance of an STCW course is recommended

Duration
1 day

Who should attend
Shipping Companies: Superintendents, quality managers, designated persons, crewing managers, nautical officers, engineers, assistants (crewing)
Course Objective
In this course you will learn about the most common challenging areas that were identified by DNV GL since entry into force of the Maritime Labour Convention, 2006 (MLC 2006).

Focus Points
- MLC structure and requirements
- Inspection and certification process
- Breakdown of deficiencies
- Requirements of example flag states
- Different approaches and related challenges

Content
The Maritime Labour Convention, 2006 (MLC 2006) is in force and every ship and ship owner has to comply with it.

But what is the learning curve within the past few months. Where are the major findings detected during Maritime Labour Inspections? Where could your system be improved to be ahead of upcoming problems?

Within the course you will refresh your general knowledge about the MLC 2006 requirements, application and responsibilities.

One focus will be laid on the Declaration of Maritime Labour Compliance (DMLC) Part I and Part II and its relation to other maritime management systems.

Subjects that are relevant for special consideration will be discussed with a workshop character so that an exchange of experience between the participants is triggered.

Taking examples of some flag states and their national requirements to be complied with in DMLC Part II will build the basis to have a closer look to understand the variations and sensitive areas in selected topics within the MLC 2006.

“"It was engaging. I expected it to be dry due to all the technical details involved. But it turned out to be interesting."
21 March 2018, Singapore

Entry requirements
Experience with Maritime Labour Convention, 2006

Duration
1 day

Who should attend
Crewing manager, quality manager, DPA, HR manager, persons responsible for MLC 2006
Course Objective
Provision of internationally recognised training to achieve the standard of competence and level of knowledge required to contribute to the enhancement of maritime security through heightened awareness and the ability to recognize security threats and to respond appropriately.

Focus Points
- The meaning and the consequential requirements of the different security levels
- Knowledge of emergency procedures and contingency plans
- Recognition and detection of weapons, dangerous substances, and devices
- Recognition, on a non-discriminatory basis, of characteristics and behavioural patterns of persons who are likely to threaten security
- Techniques used to circumvent security measures

Content
The course provides participants with the knowledge required to enable personnel without designated security duties in connection with a Ship Security Plan (SSP) to enhance ship security in accordance with the requirements of Chapter XI-2 of SOLAS 74 as amended, the ISPS Code, and section A-VI/6-1 of the STCW Code, as amended.

Interactive training methods are used to ensure communication of the required knowledge, understanding and proficiency.

Achievement of competence is assessed continuously during the course and by means of a final test.

Entry requirements
Commencing seagoing service

Duration
1 day

Who should attend
Seafarers or other shipboard personnel who will not be assigned specific security duties in connection with the Ship Security Plan; shore-based personnel involved in ship security
Course Objective
Provision of internationally recognised training to achieve the standard of competence and level of knowledge required to undertake the tasks, duties and responsibilities assigned under the Ship Security Plan.

Focus Points
- Maintain the conditions set out in a Ship Security Plan
- Recognition of security risks and threats
- Undertake regular security inspections of the ship
- Proper usage of security equipment and systems

Content
The course provides participants with the knowledge required for seafarers with designated security duties in connection with a Ship Security Plan (SSP) to perform their duties in accordance with the requirements of Chapter XI-2 of SOLAS 74 as amended, the ISPS Code, and section A-VI/6 of the STCW Code, as amended. Interactive training methods are used to ensure communication of the required knowledge, understanding and proficiency.

Achievement of competence is assessed continuously during the course and by means of a final test.

Entry requirements
Until 1st January 2014, seafarers with designated security duties who commenced an approved seagoing service prior to this date shall be able to demonstrate competence to undertake the tasks, duties and responsibilities listed in column 1 of STCW table A-VI/6-2 by:

- approved seagoing service as shipboard personnel with designated security duties, for a period of at least six months in total during the preceding three years; or
- having performed security functions considered to be equivalent to the seagoing service; or
- passing an approved test; or
- successfully completing an approved training course

Duration
2 days

Who should attend
Seafarers or other shipboard personnel, such as armed guards, likely to have designated security duties in connection with the Ship Security Plan, shore-based personnel involved in ship security
BUSINESS SKILLS
Communicating and Leading Effectively

Cross Cultural Working

HSE Leadership for Managers Course

Leadership and Teamwork in Shipping

Negotiating Skills for Professionals

Shipping Finance – Understanding and Creating New Perspectives
Course Objective
This course gives you the opportunity to evaluate and reflect on the communication strategies you are currently using in your role as a leader. You will be introduced to some new approaches that may be more effective in handling certain people or situations and have the chance to try them out for yourself. You will leave the course feeling better equipped to manage tricky team situations and more secure in your ability to deal with them thanks to the insights and new tools that you have learnt.

Focus Points
- The basic mechanisms of communication
- Communicating as a leader
- The demands of simple and complex leadership
- Situational leadership
- How you are perceived through your communication style
- How to clarify roles and expectations
- How to avoid misunderstandings
- How to give constructive feedback

Content
Communicating effectively with the people around us is the most vital skill we can acquire regardless of where we are operating, in an office, on board a vessel or in our personal lives.

This course introduces the participants to the basic mechanisms of communication and highlights how easily our messages can be misunderstood if we are not aware of all the elements that are being transmitted both verbally and non-verbally each time we enter into an exchange.

Strong communication skills enable us to build and foster our relationships, as well as strengthen and motivate our teams. When we communicate we not only generate ideas and exchange facts, we also transmit emotions, build trust and create consensus, if we do it right. In fact, communicating well is a key skill when leading your team and this workshop will make sure that you are on the right track to doing it effectively.

After this first course you may be keen to explore these topics further. Additional courses can be tailored for the individual needs of your team or your company. Please consult us for details of further courses we can offer.

"An eye opener, putting things and ideas in perspective."
22 November 2017, Hamburg, Germany

Entry requirements
None
Duration  1 day
Who should attend  Managers and future managers working in the maritime industry
Course Objective
This course is offered in conjunction with our partner, Sales Training International, based in the UK.

The course focuses on the impact of culture upon communication in the workplace, and how different cultures view their cultural norms of communication as being ‘normal’ and therefore other styles as ‘abnormal’. It helps participants address this problem, giving them greater understanding of both communication styles and how these affect the different ways different nationals will approach leadership, meetings, negotiations, etc.

By the end of this course, participants will be able to:
▪ Define ‘What is Culture?’
▪ List the generic cultural traits of the people with whom they work
▪ Demonstrate an understanding of culture and its impact upon the working environment
▪ Demonstrate improved communication skills
▪ Explain the different styles of working with people of different cultures
▪ Solve communication problems that occur due to culture
▪ Manage challenging situations that may be caused by differences in culture

Focus Points
▪ An Introduction to Cross Cultural Working
▪ The Basics of Effective Cross Cultural Communication
▪ Managing Across Cultures

Content
Cross cultural communication at work, in order to be effective and productive, must be managed. This means ensuring that staff, managers and senior employees all appreciate what it takes to work with (and in) different cultures. Such an appreciation may come naturally to people who are well travelled, with mixed heritage or simply have good communication skills; others are less flexible and may struggle to show empathy towards others who do or think differently. Although it is the latter that may need more specialist attention, all employees will benefit from learning about cross cultural communication at work.

Entry requirements
None
Duration
2 days
Who should attend
People working in an intercultural environment
### Course Objective
This course addresses leadership principles for HSE Risk Management. After attending the course, you will understand the attitude and behaviour required of leaders in order to change and improve. This one-day course will help you to become familiar with basic leadership principles for effective HSE risk management.

### Focus Points
- HSE Challenges in today’s organisations
- Definitions and principles of Leadership (versus Management)
- Roles of Leaders in Risk Management
- Risk management; Balancing Enterprise and Operational risks
- Communication in HSE Risk Management
- Coaching as a tool of behavioural change
- Creation of Commitment
- Commitment to Norms and Rules
- Measuring progress
- Didactics

### Content
Line Managers are increasingly required to take responsibility for actively managing the risks in their organisation. Managing risks related to Health, Safety and Environment (HSE) should be high on every manager’s agenda.

During the training we use a mix of activities to engage all participants in the learning process. We use presentations, group exercises, group discussions and tests.

### Entry requirements
None

### Duration
1 day

### Who should attend
Managers with a responsibility for HSE and HSE managers who want to improve on HSE leadership in the organisation
Course Objective
This course gives you the opportunity to evaluate and reflect on the communication strategies you are currently using in your role as a leader. You will be introduced to some new approaches that may be more effective in handling certain people or situations and have the chance to try them out for yourself. You will leave the course feeling better equipped to manage tricky team situations and more secure in your ability to deal with them thanks to the insights and new tools that you have learnt.

Focus Points
- Communicating as a leader
- The demands of simple and complex leadership
- Team leadership
- Your own potential within a team
- Various tools of leadership and teamwork
- How to generate enthusiasm and trust
- Adjusting your leadership style with regards to team needs

Content
How do you set up a team that will be effective? How can you select the right people, generate a team spirit, keep the momentum rolling and who will be the one to lead the team? Particularly in an environment where physical harm or even death is possible due to accidents at sea or in the port, high quality leadership and teamwork are of utmost importance today.

After your active participation in this course you will have a broad understanding of leadership and teamwork in different environments and understand the power of good leadership and team building in the framework of Human Factors in the maritime domain.

This module will be delivered by trainers from VENLYS Maritime Specialisation Services: www.venlys.com.

Entry requirements  None
Duration          1 day
Who should attend Managers and future managers working in the maritime industry
Course Objective
By the end of this two-day workshop participants can apply the key steps in negotiation and can build on their own personal styles so they are more effective negotiators both in and out of the workplace.

Focus Points
Course participants will learn to:
- Apply the fundamentals of negotiation
- Use the eight stages for successful negotiating – from preparation to closing the deal (BATNA & WATNA)
- Demonstrate each stage of the structured approach to negotiation, including why ‘Win-Win’ has its drawbacks and understand a consultative approach
- Use five further proven techniques to exert influence for best effect
- Demonstrate effective questioning and listening skills and understanding of the other parties
- Turn features of their negotiating position into benefits
- Explain the challenges of negotiating in a multi-cultural environment and plan to overcome them
- Prepare personal action plans for future success

Content
The ability to negotiate is without doubt an advantage in all aspects of life. In professional business situations, sharp negotiating skills are not an optional extra but an essential to maximise personal effectiveness. This highly practical guide is for professionals – whether negotiating over the phone or face-to-face – and will take you through the key steps of negotiation, clearly directing you towards the most effective route to developing successful negotiating outcomes.

The challenge in a multi-cultural environment is that it increases the chances of misunderstanding and miscommunication. In this environment clarity and a willingness to understand the other party are critical. In this workshop, we will explore how to negotiate effectively to build and preserve relationships and get effective and sustainable outcomes, which lead to commitment from all parties.

This module was designed and will be delivered by trainers from Sales Training International Ltd.
Course Objective
This course gives you the opportunity to get deeper into the topic of shipping finance. After the course, you will be able to assess a shipping investment through cashflow analysis, create a Loan Proposal for this investment, and discuss in detail the Term Sheet and major clauses of the Loan Agreement.

Focus Points
- General principles of shipping finance and the impact of economic variables
- Objectives of borrowers and lenders, risk analysis, securities and cashflows
- Various financing schemes available (bank debt, private equity, capital markets)
- Components of a shipping investment appraisal
- Cost of capital and the capital structure of the company (debt/equity mix)
- What is a non-performing shipping loan and how can it be handled? (Borrower’s and Lender’s perspective)

Content
Shipping is a capital-intensive industry. In today’s constantly shifting economic climate, ship finance is one of the most affected areas. Charter markets are struggling and the international banking sector has been heavily affected by the credit crunch and strict regulatory controls, triggered by the collapse of Lehman Brothers. Now, more than ever, we need to understand and “Think out of the Box”.

This course will examine the financing issues of a shipping investment and how these are addressed by bank financing and alternative financing schemes.

This module will be delivered by Katerina Stathopoulou, Executive Director, Investments & Finance Ltd.

Entry requirements None
Duration 1 day
Who should attend Managers and future managers interested in ship finance
OPERATING SHIPS
DNV GL – Maritime Academy course catalogue  Operating ships
ENERGY EFFICIENCY
EEDI in practice - Energy Efficiency Design Index

Energy Efficient Operation of Ships – Masterclass

Practical Guide to Antifouling Management & ISO 19030

Preparing for the EU MRV Regulation

Voyage Optimisation
Course Objective
Participants will gain a better understanding of how the EEDI is designed and learn how to calculate and to work with the index in practice.

Focus Points
- Background to the EEDI
- The role of IMO and UNFCCC
- Introduction of other IMO and industry-driven GHG reduction measures
- Calculation of the EEDI
- Generation of the EEDI Technical File

Content
Although shipping is by far the most energy efficient mode of transport today, society has also started to look at CO2-emissions from ships with a critical eye.

The EEDI is an index for evaluating the potential transport efficiency of a ship. The theoretical CO2 emissions at 75% of the main engine power are expressed in relation to the corresponding ship speed at a defined draught.

Maritime Academy’s course is designed not only to get an overview of the IMO’s current development activities regarding the design index, but also to show participants how to calculate and to use the EEDI in practice.

Course participants will gain a better understanding of what the EEDI is all about, what is required to generate an EEDI Technical File (the base document for any verification and certification), how to calculate the design index and how to cope with special cases. Case studies will be used to illustrate the main parameters that have an impact on the design index.

Entry requirements
Participants should have technical knowledge about speed-power-revolution relation of ships, ship design in general and basic knowledge of marine propulsion.

Duration
1 day

Who should attend
Shipping Companies: Tech. Director (CTO), Inspection: Superintendent, Fleet Manager, Chief Operating Officer, CSO, Assistance; Quality / ISM: Designated Person; Yard: Management: Tech. Director (CTO), Managing Director (CEO); Design: Design Manager, Engineers (Naval Architects)
ENERGY EFFICIENT OPERATION OF SHIPS - MASTERCLASS

**Course Objective**
You will acquire a solid understanding of all the key elements leading to the energy efficient operation of ships. After the course you will be in a much better position to obtain real benefits from your SEEMP and become your company’s expert on energy efficiency.

**Focus Points**
- Fuels and Fuel Converters
- Energy Efficiency Options in Operation (voyage planning & execution, trim, autopilots)
- Energy Efficiency Options in Machinery (main, auxiliary, hotel load)
- Energy Efficiency Options in Hydrodynamics (resistance, propulsion)
- Hull & Propeller Roughness
- Antifouling
- Hull and Propeller Monitoring and Maintenance
- Management Plans for Energy Efficiency

**Content**
With the SEEMP (Ship Energy Efficiency Management Plan) being mandatory since January 2013, it is clear that many ship operators have simply focused on compliance and are not addressing the real issues affecting shipping’s impact on the environment. There is, in addition, the ongoing necessity to focus on cost reduction and profitability due to the prevailing downturn in the maritime sector. It is therefore high time to explore all the options and prepare for an energy efficient future.

This comprehensive two day course is designed for those who are ready to take these challenges seriously and who want to achieve real improvements in the efficiency of their vessels.

The eight modules cover the theoretical foundations of options in hydrodynamics, machinery operation and nautical operation as well as their practical implications. Hull roughness and antifouling are discussed in depth with reference to the upcoming ISO 19030 standard (Measurement of changes in hull and propeller performance).

With a high emphasis on active participation from the attendees, this course will lead to a better understanding of the different options and how to implement them.

**Entry requirements**
- Good maritime knowledge

**Duration**
- 2 days

**Who should attend**
- Shipping Companies: Management: Technical Director; Inspections: Superintendent, Fleet Manager; Chief Operating Officer, Chief Engineer. On Board Personnel: Masters, Nautical Officers
Course Objective
The course introduces antifouling management in unpretentious “jargon-free” language. The course explains mechanisms behind different antifouling options, raising understanding for their differing performance, strengths and shortcomings. The course also gives a general introduction to performance monitoring in antifouling management focusing on ISO 19030.

Focus Points
- Hull & propeller roughness
- Basics of coatings
- Antifouling options (incl. biocide-free alternatives)
- Choosing the right antifouling strategy
- Performance monitoring and ISO 19030

Content
The course explains the basics of roughness and its impact on fuel consumption. This is the starting point to look at antifouling where products have varying initial roughness and degrading histories between docking. The course explains why performance degrades differently, what is behind alternative options (and the promises of vendors). From qualitative understanding for initial selection, we move to quantitative performance monitoring and the pitfalls involved in this stage. The focus is on raising awareness of different options and understanding pros and cons of these. The course is given by internationally renowned experts in the field, but focuses on a brain-friendly, easy-comprehension style. After the course, participants will understand commonly used jargon and be equipped to make the right choices in antifouling products and monitoring options.

Entry requirements  None
Duration  1 days
Who should attend  Shipping Companies: superintendent, fleet manager, energy manager
Course Objective
- To raise awareness about key decisions that need to be taken relating to the data to be collected and reported annually from 2018
- To highlight smart approaches for data handling and calculations
- To identify the main challenges when working towards compliance
- To foster an open discussion among participants on the most practical and efficient way to achieve compliance for their fleet

Focus Points
- Overview of regulation and timeline of the EU MRV, as well as related IMO Data Collection System
- EU MRV monitoring plan and implementation
- Resulting regulatory requirements related to your monitoring/reporting procedures and system
- Choosing the optimal reporting solution – what tools exist and what solution would suit your operation?
- The importance of collecting high quality data
- Options for gaining added value out of the improvements towards compliance
- Longer term outlook and consequences of EU MRV

Content
The first deadline established by the EU MRV regulation 2015/757 was reached on 31 August 2017 so by now shipping companies should have submitted their first monitoring plan to an agreed verifying body. The regulation also states that from January 2018 all voyages to and from EU ports need to be monitored and reported in order to be able to prepare emissions reports annually, so there is still some preparing to be done. IMO is also planning to set up a similar emissions monitoring scheme starting one year later.

For those companies who prefer to have face-to-face guidance to deepen their understanding of these new requirements and their consequences, Maritime Academy offers this workshop-style training course to help you get all your questions answered and explore the advantages and disadvantages of the various options. Please contact your local Academy.

DNV GL has developed a thorough solution to support companies through these changes including a free App. You can read more about our MRV-Ready service here: https://www.dnvgl.com/maritime/advisory/mrv-ready.html

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**Entry requirements**
Knowledge of basic shipping and compliance topics; voyage schemes and ship to shore reporting; international and national regulatory bodies for shipping

**Duration**
0,5 days

**Who should attend**
Technical superintendent, fleet manager, energy manager, environmental manager, HSQE manager, IT manager
Course Objective
Participants will expand their knowledge about fuel efficient vessel operation and thus be able to take better decisions as “energy managers” and be in a stronger position when negotiating with suppliers and contract partners. Specifically, the tasks of system/tool selection, communication with crews and maintaining the SEEMP will be addressed.

Focus Points
- Factors influencing energy consumption en route
- Concrete options to support efficient operation: prospects and limitations
- Integration into daily operation and fleet management

Content
Fuel efficient vessel operation is a key business objective, reducing operational expenses to the unavoidable minimum. This can be achieved through effective awareness training, basic education, suitable supporting tools and meaningful follow up by the onshore organisation.

The voyage optimisation course is tailored towards onshore personnel who have to support the fleet with fuel efficient actions.

The course covers fuel efficient voyage planning taking into account safe operation, weather and contractual requirements. Participants are made aware of options to lower consumption and gain deeper insight into the specifics of weather routing, rudder and autopilot use, ballast water use and speed setting. Challenges when selecting supporting tools and integrating new routines into daily operation are discussed.

Course content covers all relevant issues related to voyage optimisation as recommended in the IMO model course on energy efficient operation of ships. Interactive teaching methods alternating between presentation, group work, case studies and guided discussions are used throughout the course to ensure audience focus and effective knowledge transfer.

Entry requirements
Basic understanding of ship resistance and M/E power demand, background as nautical officer would be beneficial

Duration
1 day

Who should attend
Energy efficiency dedicated staff in shipping companies: Superintendents, fleet managers, energy managers; interested masters and nautical officers
DO YOU KNOW YOU CAN SAVE FUEL THROUGH E-LEARNING?

Energy Efficiency on Board

Making significant improvements to the energy efficiency of on-board systems by using e-learning? What sounds like a challenging idea is now becoming real.

Learn about energy saving potentials

The e-learning course “Energy Efficiency on Board” raises awareness about improving energy efficiency simply by changing crew behaviour and optimising how equipment is used on board. It is designed to train people on board on the effects if energy parameters in vessels’ operation and the cost saving involved when energy consumption becomes energy efficiency optimization.

Other specific solutions are available for you

We offer you a well-designed and technically high level course. But we can also adapt the course to suit your company. Think about your specific requirements and discuss the possibilities with us in a personal meeting. For a normal vessel there are potential savings of millions of US dollars per year, just through changed behaviour, understanding and better planning by the crew on board.

Train your crew to be efficient - don’t wait any longer.
ENVIRONMENTAL PROTECTION
Hong Kong Convention on Ship Recycling

Asbestos - A Hidden Hazard On Board Ships

Ballast Water Management

EU Regulation on Ship Recycling (EU SRR)

Optimizing Waste Management on board - Operational and Technical Management Issues

Vessel General Permit

Approved HazMat Expert
Course Objective
The Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships, which is expected to enter into force in 2020, brings requirements for both ships and ship recycling facilities. According to the Convention, ships of 500 GT and above should have a certified Inventory of Hazardous Materials (IHM) on board. By attending this course participants will learn about the preparation of IHM both for new and existing ships and get an overview of the requirements. IHM GREEN SERVER software will also be introduced, showing innovative solutions covering the whole life cycle of a ship including the IHM.

Focus Points
- Hong Kong Convention requirements
- Inventory of Hazardous Materials
- Market Overview
- Ship owner/ Designated person relationship for maintenance of IHM
- Preparation of Ship Recycling Plan in cooperation with Ship Recycling Facility (SRF)
- Guidance for ship recycling preparations prior to EiF of the Convention
- International Ready for Recycling Certificate
- Introduction of IHM GREEN SERVER Software

Content
The course presents the requirements of the Hong Kong Convention and responsibilities of ship owners. After a general introduction about the ship recycling industry participants will be informed in detail about the preparation of an Inventory of Hazardous Materials (IHM) for existing ships, for which they will be responsible, and the IHM Certification processes including an overview of related tasks for new ships. A module on preparing for ship recycling and the tasks of the ship recycling facilities is also included, as well as the presentation of a software tool developed by DNV GL to support these tasks. Finally issues such as documentation and reporting requirements, including implementation into fleet management, will be discussed.

By attending this course, participants will be able to prepare their companies for future compliance with the international requirements.

Entry requirements
Basic maritime knowledge

Duration
1 day

Who should attend
Shipping Companies: Technical directors (CTO), managing directors (CEO), fleet managers, chief operating officer, quality managers, internal auditors
Course Objective
The participants will understand the subject ‘Asbestos’ as related to the shipping industry in a comprehensive and holistic way and know how to manage issues related to this material in line with the latest standards and experiences.

Focus Points
- Current national and international legislation (incl. Hong Kong Convention)
- Properties and handling of asbestos and its effects on health and environment
- Asbestos usage in shipping industry and on board of Ships
- Development and Practice of Standard Operational Procedures (SOP)
- Maintenance, Removal and Disposal of Asbestos
- Ship specific facts and requirements
- Inventory of hazardous materials (IHM)

Content
The IMO SOLAS Regulations (Chapter II-1, Part A-1, Structure of ships, Regulation 3-5) bans the use of asbestos on vessels from 1 January 2011. For all ships, new installation of materials which contain asbestos shall be prohibited. The prohibition applies to materials used for the structure, machinery, electrical installations and any equipment covered by the SOLAS Convention.

During inspections of ships in service asbestos has regularly been found in such places as fire blankets, joints and insulation materials, types of sealants, friction material of brakes, wall and ceiling coverings, cords, gaskets, electric fuses, etc. Exposure to asbestos fibres in the air can cause a range of serious diseases. Shipping Companies, Shipyards, Suppliers, Class Societies and Authorities are facing challenges in management of asbestos and it is clear that there is a huge lack of knowledge on this subject within the shipping community.

This course provides an introduction and guidance to achieve certified expertise about management of low level exposure of this hazardous material.

Having attended this course the attendees can assume the role of a designated person for asbestos matters within an organisation.

Employers will appreciate the competence and contribution of the employee to better management of hazardous materials as an integrated part of the company policy and reputation.

The course falls into two main parts – awareness of current legislation and practical hints for asbestos removal.

Practical case studies worked on by the participants make the course stimulating and interactive.

Entry requirements
None

Duration
1 day

Who should attend
Ship owner, ship manager, technical directors, project supervisor, technical assistant, shipyard manager, shipyard engineers, surveyors, etc.
**Course Objective**
This course informs participants about the current status of regulations and the technical solutions that will enable them to comply with the Ballast Water Management Convention when it comes into force in September 2017. Further relevant information about important national requirements in US waters is also provided.

**Focus Point**
- Status of most important regulations (e.g. IMO and US Coast Guard)
- Onboard systems for Ballast Water Management – Technical, economic and practical aspects
- Practical and Class aspects
- Ballast water management plan

**Content**
IMO covers BWM in the Ballast Water Management Convention 2004 and associated guidelines. Experience with the implementation so far has raised practical questions, such as sampling and how to document compliance. The US Authorities/Coast Guard have diverged, imposing their own variety of BWM regulations.

Participants will get an update on recent developments for ballast water management regulations, technologies and industry practice. Solutions complying with current regulations are illustrated for modern cargo vessels. Participants will acquire the necessary understanding to enable them to make decisions for their own fleet.

Please also refer to DNV GL web page: [https://www.dnvgl.com/maritime/ballast-water-management/index.html](https://www.dnvgl.com/maritime/ballast-water-management/index.html)
Course Objective
The EU ship recycling regulation (EU SRR) will affect the owners of EU flagged ships and ships visiting EU ports earlier than the Hong Kong Convention. This course presents the timeline and some new tasks for the affected parties because while the new regulation is similar to the Hong Kong Convention it has some additional requirements.

Focus Points
- Requirements of the EU SRR compared to those of the Hong Kong Convention
- Milestones for compliance with the EU SRR
- Inventory of Hazardous Materials (IHM) with two additional materials
- Ship owner/ Designated person relationship for maintenance of IHM
- Similarities with other regulations (SOLAS and MARPOL)
- Introduction of IHM GREEN SERVER (IGS) Software

Content
After a quick introduction to the ship recycling industry, participants will be briefed about the requirements of the new EU ship recycling regulation, including some details about the time frame and new tasks.

Parties most affected by the new regulation include:
- Ship owners – need to have their IHM earlier than expected with the Hong Kong Convention.
- Ship Recycling Facilities – need to prepare if they wish to appear on the EU list
- Maritime authorities - need to be prepared to check the IHM and its certification
- HazMat Experts - need to be aware of new challenges when preparing an IHM according to the EU SRR

Other interested parties include managers making decisions about future investments related to compliance with upcoming laws and regulations.

The course comprises a presentation and an interpretation of the regulation and is consolidated by case studies. After the course participants will know when the requirements of the EU SRR will become mandatory, and will have received clear guidance on how to comply within given time frames.
Course Objective
Upon the completion of the course, the participants will have a thorough knowledge of the regulations of Annex V of MARPOL and be able to identify opportunities for further improving the current garbage management plan and implement actions that can easily ensure compliance and an environmentally sound waste management in harmony with the established environmental standards of the company.

Focus Points
- Requirements of the revised Annex V of MARPOL
- Definitions, examples, quantities of ship-generated garbage
- Discharge of garbage within and outside Special Areas
- Requirements for Garbage Management Plans, Placards and Record Books
- Optimizing garbage management
- Management of cargo residues and washing water
- Garbage treatment equipment (incinerators, recycling)
- Disposal of garbage in ports and handling of special garbage such as batteries, medical waste, etc.
- Emerging needs of waste management: biowaste, potentially hazardous waste, used cooking oil, various disposal options, etc.

Content
Garbage management remains a critical area for ship operators due to the increased concern of coastal states about marine pollution, the lack of reception facilities in many ports around the world, the existence of national requirements for the management of some special waste streams and the difficulties encountered by crews when trying to properly manage garbage on their ships. In addition, there are still types of garbage for which an agreement at the international level has not yet been reached to help ships and the crews effectively deal with their management such as the used cooking oils, plastics containing heavy metals, etc.

Designed with the needs of shore-based ship management staff in mind, particularly those involved in the environmental management and operation of vessels, as well as Masters and Officers, the course comprises practical exercises using case studies to simulate the management of garbage and recordkeeping, in addition to the usual presentation format.

The course covers the most important aspects of the regulations including the new categorization of ship-generated garbage, the roles of officers and crew members and the obligations for recordkeeping.

It also explains ways to identify and manage waste streams that might be hazardous for the crew and those requiring segregation and special handling prior to their disposal.
Although there is no requirement for approval or recognition of such a course by a flag state, this should be regarded as a dedicated training programme to facilitate garbage management on board the vessel and to ensure compliance with pollution prevention regulations.

The course provides advice on best available options for garbage management aimed at achieving a higher level of protection for the environment and lays down principles that should be applied once waste is generated to prevent risks to human health.

**Entry requirements**  
Good knowledge about the normal operation and maintenance of a vessel

**Duration**  
1 day

**Who should attend**  
Shipping Companies: Management: Tech. director (CTO), managing director (CEO), HR manager, assistance; Inspection: Superintendent, fleet manager, chief operating officer; Quality / ISM: Quality manager, internal auditor, designated person, environmental officer; Crewing Agency/Crewing: Crewing manager, assistance; On Board Personnel: Nautical officers, engineers, rating  
Ports and Terminals: Management: Tech. director (CTO), managing director (CEO); Quality: Quality/Environmental manager
Course Objective
From December 19th 2013 new VGP requirements came into force. This course covers the VGP training requirements for vessel operators and shipboard personnel involved in the management and control of the eligible discharges. The participants will become familiar with the sound management of the potential discharges from their vessels and the proper implementation of the applicable federal and state requirements.

Focus Points
- Discharge effluent limits and best available management practices
- USCG and state requirements on ballast water management
- Planning and conducting inspections and monitoring
- NPDES required Documentation and Records
- Vessel class specific requirements

Content
The course provides detailed information on the requirements of the Vessel General Permit (2013 VGP) issued by the Environment Protection Agency (EPA) under the National Pollution Discharge Elimination System (NPDES) to regulate discharges incidental to the normal operation of vessels trading in US waters. The permissible effluent limits and the corresponding best management requirements for any type of controlled discharge are thoroughly presented to help participants identify which of them are eligible for coverage in their vessels and to what extent their existing maintenance and management systems comply with them.

The inspections/monitoring requirements as well as the reporting/recordkeeping procedures are analysed and practical case studies are used to demonstrate how to develop a company/vessel roadmap that is compliant with the complex VGP requirements.

Entry requirements
Good knowledge of the normal operation and maintenance of a vessel and of management systems used in the shipping industry

Duration
0.5 days

Who should attend
Shore-based ship management staff, particularly those involved in the environmental management and operation of a vessel, masters, officers and crew of vessels trading in US waters.
Course Objective
To qualify future HazMat experts who will be able to undertake a comprehensive preparation of IHM including the development of "Visual Sampling and Check Plan", the taking of samples onboard and the preparation of required documentation.

Focus Points
- Knowledge of relevant legislation
- Evaluation of onboard situation and preparation for onsite inspection
- Communication and software tool
- Safe working conditions
- Conduction of onboard inspections
- Taking of samples & statistics and on-site derivation from sampling plan according to unexpected situations
- Analysis of samples and interpretation of analysis results
- Preparation of reports and ship specific IHMs

Content
The course has been specifically developed in order to train HazMat Experts in line with the IMO Hong Kong Convention – SR/CONF/45, the EU Ship Recycling Regulation (EU SRR), which has entered into force on 30 December 2013. Moreover it covers the related Guidelines for the Development of the Inventory of Hazardous Materials (IHM).

The course outlines the rules and regulations in respect of ship recycling including requirements for ship owners and documentation of hazardous materials for allowing safe ship dismantling activities.

Interactive case studies support the learning process during the theoretical part of the course. The practical part will take place on board a ship to help complete the aim of the course to prepare the Inventory of Hazardous Materials (IHM).

Successful participation will be verified with an examination on the fourth day and confirmed with the awarding of a DNV GL certificate.

Entry requirements
- Previous shipping or HazMat knowledge

Duration
- 4 days

Who should attend
- Shipping Companies: Superintendents, fleet manager; surveyors
MANAGEMENT SYSTEMS
Basics of a Quality Management System according to ISO 9001 for Shipping Companies

Basics of an Environmental Management System according to ISO 14001 for Shipping Companies

Energy Management (ISO 50001) for Shipping Companies

Revised ISO Standards 9001:2015 and 14001:2015 for Shipping Companies

Implementing an Integrated Management System to Handle Complexity in Shipping

Internal Auditor ISM

Internal Auditor ISM-ISPS-MLC for Shipping Companies

Internal Auditor of an Integrated Management System acc. to ISO 9001, ISO 14001 and ISO 45001 for Shipping Companies
Course Objective
You will understand the structure and basic requirements of the standard ISO 9001 and know how to implement them in the company ashore and on board. You will be enabled to integrate quality management into your existing Safety Management System.

Focus Points
- Elements of the ISO 9001 standard
- Parallels with and differences to the ISM Code
- Integrated management system: ISO 9001, ISO 14001, ISM Code

Content
Ships form a vital link between business partners. They carry their valuable products to their customers. Therefore, more and more charterers of vessels and industry customers of shipping lines ask for a certificate according to ISO 9001. They want to receive reliable and error-free transports and wish to see an evidence for systematic and well organized work. Since more than 20 years, the international standard ISO 9001 provides the framework for effective and efficient quality management systems.

This course provides basic information about the requirements of the standard ISO 9001.
You will acquaint yourself with methods of implementation of a quality management system in shipping companies and on board its ships. You are going to understand the synergies between the requirements of ISO 9001 and the ISM Code.

If you are a Manager, Designated Person, quality representative or superintendent, you will learn how to integrate a quality management system into an existing Safety Management System according to the ISM Code. Further information about the certification process completes this practical workshop.

Typical problems arising during the implementation and improvement of a management system are addressed. The interaction with the trainer and participants with their own experience from various areas of the shipping industry facilitates the identification of suitable solutions.

Throughout the course you are guided by our trainers who are well-experienced in implementing and auditing of quality management systems.

Entry requirements
Knowledge of marine management systems, in particular ISM
Knowledge of shipboard operations

Duration
1 day

Who should attend
Shipping Companies: Management: Technical director (CTO), managing director (CEO), assistance; Inspection: Superintendent, fleet manager, chief operating officer, assistance; Quality / ISM: Quality manager, designated person, assistance
On Board Personnel: Nautical officers, engineers
Course Objective
You will get an overview of requirements of the standard ISO 14001 and know how to implement them in the company ashore and on board. You can integrate environmental management into your existing Safety Management System. You will be able to prepare your company for an ISO 14001 certification.

Focus Points
- Structure and requirements of an environmental management system acc. to the ISO 14001 standard
- Identification of environmental aspects and objectives and setting up a program
- Interfaces with ISM and quality management
- The certification process

Content
Due to global warming, change of climate and limited oil resources on earth, our society has developed a new environmental awareness. Although there are a series of legal requirements available for the shipping industry, a company can do more to support a positive development. An environmental management system helps the company to optimize operations and further considerations. More and more customers ask for a certificate according to ISO 14001.

This course provides detailed information about the requirements of the standard ISO 14001. You will acquaint yourself with methods of implementation of an environmental management system in shipping companies and on board its ships. If you are a Manager, Designated Person, quality or environmental representative or a superintendent you will learn how to integrate an environmental management system into an existing Safety Management System according to the ISM Code.

Entry requirements
Knowledge of marine management systems, in particular ISM
Knowledge of shipboard operations and environmental regulations (MARPOL)

Duration
1 day

Who should attend
Shipping Companies: Management: Techn. director (CTO), managing director (CEO), Assistance; Inspection: Superintendent, fleet manager, chief operating officer, assistance;
Quality / ISM: Quality manager, designated person, assistance
On Board Personnel: Nautical officers, engineers
Course Objective
This course informs about the requirements of the energy management standard ISO 50001 (EnMS). Participants will learn the basics necessary to set up an energy management system and receive valuable insights to help them implement the new requirements into existing procedures and processes. Furthermore, explanations will be provided on how to use an existing management system and extend it for the tasks of an EnMS.

Focus Points
- Introduction to energy efficiency
- ISO 50001 vs. ISO 14001 and MARPOL Annex VI
- Terms and definitions
- Requirements of the ISO 50001 standard
- Some energy efficiency solutions for shipping companies

Content
Energy efficiency and energy management today are important issues for all companies, big and small. This course provides information about the content and the structure of an energy management system (EnMS) according to the ISO 50001 standard and how to integrate the additional requirements into an existing management system. Differences and similarities with environmental (14001) and/or quality management (9001) systems are highlighted as useful.

Entry requirements
Knowledge about ISM Code, ISO 9001 and ISO 14001 management systems

Duration
1 day

Who should attend
Management: Technical management, management system representative (quality management, environmental management), persons responsible for production or management processes, prospective energy manager
The International Organisation for Standardisation (ISO) has revised its standards for quality management systems (ISO 9001:2015) and for environmental management systems (ISO 14001:2015). The revised standards came into force in September, 2015 and require organisations to update their existing management systems progressively over the next three years.

After a presentation of the main changes the course facilitator will use group work and discussions to indicate how these changes can be implemented in your organisation. You will gain a better understanding of how to combine the revised requirements with existing elements of ISM and how to develop your integrated management system in your organisation ashore and on board of your vessels.
Course Objective
During this course, you will learn how to implement or adapt an Integrated Management System according to the latest ISO standards and in compliance with the ISM code and other business operations in the maritime industry.

Focus Points
- Principles of modern maritime management systems
- Integration strategy of management systems focusing on need for high quality documentation
- Methodologies of new ISO revisions since 2015
- Implementation of ISO 9001:2015 and 14001:2015 requirements in relation to the ISM code
  - Company in context with the management system’s scope and needs of interested parties
  - Leadership and commitment
  - Planning of objectives
  - Managing risks & changes
  - Processes of shipping operations
  - Performance evaluation
  - Improvement of the system
- Harmonized “seamless” certification of management systems

Content
The three-year transition period since the publication of the 2015 ISO standards will end in September 2018. This course will enable you to make an efficient transition from your existing management systems to the modern methodology for an integrated system. You will understand how an integrated system, based on the ISO 2015 high level structure, can be established as a powerful and efficient management tool to increase the business performance of your company.

Special attention will be paid to the handling the increasing complexity of operations for a shipping company in today’s maritime business environment.

State of the art interactive teaching methods are employed during the two days to ensure that the learning is effective. During group activities, you will become familiar with suitable tools for developing and adapting management systems. You learn by practical activities how to plan an integrated management system and to develop a modern process structure. Throughout the course you are guided by our trainers who are well-experienced in implementing and auditing a variety of management systems.

Entry requirements
None

Duration
2 days

Who should attend
Management representative, quality managers, designated persons, administration support staff
Course Objective
Participants will receive a sound understanding of auditing techniques and processes as well as management of an internal auditing program. Participants will also gain an appreciation for the role and importance of internal auditing programs within the maritime industry as related to Safety and Quality Management systems.

Focus Points
- Definitions and objectives
- Safety Requirements
- Experience Feedback/ISM Implementation
- Internal Auditing Requirements
- Audit procedure and tools
- Audit conduct and techniques
- Typical problem areas
- PSC Detentions/Experience Feedback
- Questioning Techniques
- Communication Skills

Content
Effective implementation and verification of the efficiency of a (safety) management system requires periodical internal audits. The approach and scope of an audit differs widely from an inspection.

The first part of the auditing process resembles an inspection activity (verification of compliance and identification of non-conformities).

This course will provide shipping and offshore company employees with the knowledge and tools necessary for performing and managing internal auditing procedures. Verification principles and methods for implementation of both formal and informal audit procedures will be examined and applied.

Entry requirements
Knowledge of ISM Code requirements

Duration
2 days

Who should attend
Internal auditors and managers within shipping and associated companies who are responsible for determining, measuring and monitoring safety performance and any continuous improvement programs
Individuals seeking interpretation of ISM Code requirements and knowledge of auditing principles
Senior and junior officers onboard who are members of an audit team
Employees at P&I and Hull Clubs conducting external audits of shipping companies
Course Objective
To qualify participants as internal auditors (ISM, ISPS, MLC) enabling them to prepare and conduct internal audits/verifications within their shipping companies in accordance with accepted auditing principles. Prior knowledge of the three standards is expected.

Focus Points
- ISM/ISPS/MLC auditing requirements
- Common features and differences
- Techniques that contribute to the success of communication processes within audits
- Planning, preparation, performance, recording, reporting and follow-up of audits
- Principles and best practices of harmonized audits and verifications
- Handling of non-conformities including root cause analysis and corrective actions

Content
Effective implementation and verification of a (safety) management system requires periodical internal audits. The approach to and scope of an audit differs widely from an inspection.

The requirements for auditing the management system within companies and on board ships have highlighted the subject of competence of internal auditors.

Our course provides you with the knowledge and expertise necessary to plan and conduct combined ISM, ISPS and MLC audits and verifications. Through the use of interactive group exercises you will also improve your communication skills and thus strengthen your overall performance as an auditor.

The first part of the auditing process resembles an inspection activity (verification of compliance and identification of non-conformities). This course will provide shipping and offshore company employees with the knowledge and tools necessary for performing and managing internal auditing procedures. Verification principles and methods for implementation of both formal and informal audit procedures will be examined and applied.

Participants will receive a sound understanding of auditing techniques and processes as well as management of an internal auditing program. They will also gain an appreciation for the role and importance of internal auditing programs within the maritime industry as related to Safety and Quality Management systems and learn about the requirements laid down in the ISO 19011 standard related to the performance of the internal audits and verifications in an integrated management system.

A written exam will test your level of achievement with respect to the learning objectives and be used as a basis to issue a certificate.

Entry requirements
- Good knowledge of ISM Code, ISPS Code and the ILO Maritime Labour Convention 2006

Duration
- 2 days

Who should attend
- Shipping Companies: Designated Persons (ashore), Company Security Officers, quality managers, superintendents, nautical officers, engineers
Course Objective

Focus Points
- Planning, preparing, conducting and documenting audits of an integrated management system
- Process analysis
- Identification and handling of nonconformities
- Interview techniques and awareness of social competence

Content
During this course you will learn how to use internal audits as a management tool for improving the system as well as the economics of a business. In accordance with the ISO 19011 you will be guided through the steps of an internal audit process. In addition, you will improve your communication skills in order to be able to activate and motivate your auditees for best results. Within the course, state of the art interactive learning methods are employed including case studies and role plays. During group exercises you will develop suitable audit tools, supporting the efficient handling and documenting of internal audits. You will learn how to identify nonconformities against the standards’ requirements and how to handle root cause analysis and the corrective action process.

Throughout the course, you are guided by our trainers who are well-experienced in implementing and auditing of management systems within shipping companies. Thus, the certification auditor perspective is also incorporated. The successful completion of the course is assessed with a final exam.

Entry requirements
Good prior knowledge of the ISM Code and at least two of the mentioned ISO standards is required.

Duration
3 days

Who should attend
QHSE managers, internal auditors, employees supporting with audits
REGULATIONS, SURVEYS AND INSPECTIONS

Flag State Regulation

Introduction to the Maritime Industry

Introduction to the Offshore Industry and Dynamic Positioning

Introduction to the System of Maritime Regulations

The SOLAS Convention

Hull Inspection Course

Major IMO Convention Updates: SOLAS and MARPOL
Navigational Audits

PSC - Interactive Workshop

Surveys and Certificates

Vetting Inspections
Course Objective
The course covers the essential tasks undertaken by the flag State administration during registration, inspection, certification and investigation of ships.

Focus Points
- Responsibilities and obligations of the flag State
- Structure of national regulations
- Inspections and certificates
- Registration of ships
- Change of flag and name
- Casualty and incident investigation

Content
This course is intended to familiarize both ship and shore-based personnel with the obligations and duties of flag States. It also describes how shipping administrations discharge their duties.

The participants will gain a better understanding of how the tasks of the flag State administration contribute to the full implementation of the applicable rules and regulations and as a result will understand the influence of the flag State and its decisions on the daily operation of ships.

Entry requirements
Basic knowledge about the shipping industry

Duration
1 day

Who should attend
Shipping Companies: Management: Tech. director (CTO), managing director (CEO), HR manager, assistance. Inspection: Superintendent, fleet manager, chief operating officer, CSO, assistance. Quality / ISM: Quality manager, designated person, assistance
Crewing Agency/Crewing: Crewing manager, assistance
On Board Personnel: Nautical officers, engineers
Course Objective
Participants will be introduced to all the different stakeholders involved in the industry enabling them to understand and fulfil their new roles better with regard to important maritime structures and regulation.

Focus Points
- Shipping companies: structure and responsibilities
- Ships: types of ships (incl. offshore vessels), ship dimensions, hull, machinery, safety equipment, load line and tonnage measurement
- The crew: qualification and manning of ships (acc. STCW)
- The cargo: types of cargo, charter parties and cargo documents
- Key maritime organisations and regulations (IMO, flag states, class societies, ISM, ISPS, etc.)
- Insurance matters: transport, damage and P&I insurance
- Nautical Equipment: RADAR, ECDIS, AIS, GPS (Travel Planning, Route Control, Collision Avoidance, etc.)

Content
The maritime industry attracts new employees on a regular basis. In order to assist with their smooth integration into the maritime world and to help them to function more effectively more quickly, Maritime Academy offers this introductory course for newcomers into the business. Previous participants have found it a very useful initiation and were quickly able to assimilate much of the new terminology and gain a clearer understanding of their new working environment.

The course kicks off with an overview of some of the key players in the maritime world – the shipping company, its structure, the ship, the crew, different types of cargo and agreements. On the second day major regulations and conventions regarding ship safety, security and the protection of the marine environment are introduced. Practical case studies are used to check that key points have been understood and there are plenty of opportunities for discussion and questions. Where possible the course will also include a visit onboard a real ship.

"The skills of the trainer were fantastic and very alive because of his professional shipping background. He could answer to all our questions. And anyhow the whole workshop was full of examples of the current shipping life. I really enjoyed the two days (...)."
7-8 February 2018, Hamburg, Germany

Entry requirements
None

Duration
2 days

Who should attend
Shipping Companies: Assistants (management, inspection, quality/ISM)
INTRODUCTION TO THE OFFSHORE INDUSTRY AND DYNAMIC POSITIONING

Course Objective
Participants will gain basic knowledge about the offshore industry and an introduction to dynamic positioning.

Focus Points
- Historical background and offshore today
- Offshore vessel types / Working Method
- Dynamic positioning – functions and operation, DP Class I – III (IMO Class)
- DPO – education and training
- Requirements for Nautical Officers
- Technical requirements DP Class I –III
- Position Reference Systems and Sensors

Content
This module is directed at newly employed or laterally hired personnel in the maritime industry without prior knowledge of the offshore industry.

The module starts with the historical background of offshore activities before going on to look at vessel types (e.g. AHTS, DSV, PSV, ROV Survey) and dynamic positioning.
In addition to the functioning of the DP system attention is paid to the training of the DP operator. The working environment of a DPO will also be briefly introduced.
Practical case studies are used as teaching methods throughout.

Entry requirements
- None

Duration
- 1 day

Who should attend
- Inspection: Superintendent, fleet manager, assistant
- Quality / ISM: Quality manager, designated person, assistant
- Crewing: Crewing manager
- On Board Personnel: Nautical officers
Course Objective
Getting to know the system of maritime regulations

Focus Points
- International and regional maritime regulating organisations
- Structure, content and application of major conventions
- Overview of survey types and intervals as well as types of certificates
- Analysis and implementation of amendments to regulations
- Application of tools developed by DNV GL, such as IMO Pilot and checklists

Content
This module explains in detail international and regional conventions in the field of ship safety and protection of the marine environment, and their structure, content and application is presented.

An overview regarding the various types of surveys and ships’ certificates is provided.

Special emphasis will be placed on the implementation of amendments of regulations.

Entry requirements
Basic knowledge of shipping

Duration
1 day

Who should attend
Shipping Companies: Technical managers (CTO), managing directors (CEO), superintendents, fleet managers, chief operating managers (COO), CSO, quality managers, designated persons, crewing managers, nautical officers, engineers, assistants
Course Objective
Participants will gain thorough knowledge of the SOLAS Convention and the mandatory Codes. The course will therefore be of benefit to anyone involved in either the construction or the operation of ships.

Focus Points
- Background and development of the Convention
- Amendment procedure
- General provisions (Chapter I)
- Technical provisions (Chapters II- XII)

Content
The SOLAS Convention is the most important of all the international conventions concerning the safety of merchant ships. The main objective of this Convention is to specify minimum standards for the construction, equipment and operation of ships. The first version of SOLAS was adopted in 1914 in response to the Titanic disaster.

This course presents the background, the content and the goals of the Convention in detail. After looking briefly at the development of the Convention, it introduces the general obligations such as the survey, inspection and certification of various types of ships as well as provisions for port State control and casualty investigation.

The participants are familiarized with each chapter of SOLAS with special focus given to construction (subdivision and stability), fire protection, life-saving appliances, radio communications, navigation, carriage of dangerous goods, management of safe operation of ships and maritime security.

Entry requirements
Basic knowledge of shipping

Duration
1 day

Who should attend
Shipping Companies: Management: Techn. director (CTO)
Inspection: Superintendent, fleet manager, chief operating officer, CSO, assistance
Quality / ISM: Quality manager, designated person, assistance
On Board Personnel: Nautical officers, engineers
Yard: Management: Techn. director (CTO)
Design: Design manager, engineers (Naval Architects)
Production: Production manager, engineers
Supplier (M&C): Management: Techn. director (CTO) Engineers: Engineers
Quality: Quality manager
Course Objective
Ship owners are experiencing a demand for improved tank inspections by qualified personnel. There is a need for better control of maintenance as well as for improved documentation for external parties.

Focus Points
The course covers the following topics and is relevant for all ship types, with an emphasis on oil tankers, bulk carriers and container ships:
- Naming of ship structures
- Hull strength and Hull structure failure mode
- Coating and coating failure
- Planning and preparation before and inspection (Safety issues/Hull damage/Reporting)

Entry requirements
None

Duration
1 day

Who should attend
Technical directors/managers of shipping companies, ship yards, superintendents, designers, consultants
Any ship or shore personnel carrying out tank inspections on a regular basis
Course Objective
IMO Conventions are highly dynamic documents with several amendments and resolutions. The course provides an update of latest issues, linking the same with existing regulations and their effect on new building as well as ship-in-operation.

Focus Points
- SOLAS: Latest developments & interpretation
- MARPOL – Latest developments & interpretation
- Safer ship and clean seas

Entry requirements
None

Duration
0.5 days

Who should attend
Ship managers, superintendents, shipyard project managers, ship brokers and surveyors
Course Objective
Navigating a vessel constitutes a significant risk. Participants in this course will learn how to use the navigational audit as a tool to improve, not only their own, but their company’s performance, while also satisfying TMSA 3 and charterers’ requirements.

Focus Points
- Involvement of the Human Element (Bridge Team and Bridge Resource Management)
- Risk Assessment
- Safe and Effective Navigation
- Auditing the Navigational Process

Content
The biggest risk facing a ship owner is a major navigational incident in spite of the fact that the techniques for safe navigation are well known. When these techniques are professionally executed, navigational risks are reduced.

Navigational audits are a requirement of TMSA and becoming more and more common in other trades e.g. bulk carriers.

This course focuses on the challenge of safe navigation today. It covers the technical background regarding navigation and gives special emphasis to current developments and charterers’ requirements. Participants will be made aware of gaps in their knowledge that could lead to unsafe procedures and understand the huge importance of the human element in the navigational process.

Risk Management and auditing are used as tools to monitor and/or improve individual skills as well as those of the whole bridge team. Improvements to existing Safety Management Systems can also be identified within such an audit.

“Learned and acquired extra knowledge beyond my current scope of work.”
9 March 2018, Singapore

Entry requirements
- Nautical background

Duration
- 1 day

Who should attend
- HR manager, superintendent, fleet manager, designated person, master and senior officers
Course Objective
Participants will learn about the key role played by Port State Control and gain a good understanding of how it functions thus enabling them to be well prepared for inspections and reduce the risk of detention.

Focus Points
- History, objectives and scope of PSC
- PSC Regimes and targeting methods
- Inspection intervals and priorities
- On board procedures
- Frequent findings and grounds for detention
- Reducing the risk for detention
- How to handle detentions and appeals
- Safety culture and the Role of Class

Content
Port State Control (PSC) has become more active in recent years and PSC regimes will continue to take measures to ensure that ships are in compliance with international requirements related to safety, pollution prevention and manning conditions on board. This one-day workshop offers practical guidance on how to prepare for and manage PSC inspections. Participants will be introduced to a number of useful PSC tools specially developed by DNV GL to support ship operators in achieving compliant operations. Active participation in the workshop is stimulated through the study of actual cases.

Entry requirements
Basic maritime knowledge

Duration
1 day

Who should attend
Shipping Companies: Superintendents, quality managers, nautical officers, engineers
Course Objective
To enable participants to coordinate surveys efficiently, having a better background knowledge about required certificates.

Focus Points
- Presentation of classification and statutory regulations
- Introduction of certificates
- Planning, preparation and conduct of inspections and surveys

Content
This module introduces the legal framework on ship inspections and surveys as well as the issuance of certificates. Distinctions are made between the requirements of the classification societies and the requirements of the flag states. The various survey types, their intervals and time periods are explained, and contents and validity of the required certificates are looked at in detail.

In addition, the course also covers the planning, preparation and conduct of inspections and surveys on board. A brief explanation of how to work with the portal "My DNV GL" is provided and also the database Equasis. Case studies are used to give the participants the chance to apply what they have learnt when dealing rules and regulations as well as how to plan surveys.

Entry requirements
Basic maritime knowledge

Duration
1 day

Who should attend
Shipping Companies: Superintendents, fleet managers, quality managers, designated persons, nautical officers, engineers, assistants (inspection)
Course Objective
To provide and empower ship managers, owners, terminal operators and all those involved in the vetting process with a deeper understanding and additional skill sets to make properly informed decisions during vessel vetting.

Focus Points
- Background and business drivers for vetting
- Vessel screening process
- Risk Assessment
- Vetting Inspection: Arrangement and preparation for on-board inspection
- Observations and findings, Root Cause Analysis
- Operator’s Comments
- TMSA

Content
In less than two decades the vessel vetting process has completely changed the oil shipping market. Almost all trading operators around the world have adopted vetting as a pre-selection process for vessels offered for chartering by measuring their compliance with Minimum Marine Safety Criteria.

Moreover, the process is still developing: from oil, gas and chemical vessels to dry bulk carriers, from on-board physical inspections to comprehensive ship operators Safety Management System assessment via TMSA audits.

Understanding the various aspects of the vetting process is of paramount importance for all vessel operators to turn current constraints into business opportunities.

Following an overview of the business drivers for vetting and a dive into risk assessment, the vetting process itself is presented under different perspectives for a full comprehension of its objectives and how to achieve them.

Vetting inspections, observations and findings and TMSA are analysed to give the key players, both on-board and ashore, the tools to prepare and proactively respond to the various issues related to vetting controls.

Entry requirements
General knowledge about shipping industry and processes on-board

Duration
2 days

Who should attend
Shipping Companies: Management: Technical director (CTO), managing director (CEO);
Inspection: Superintendent, fleet manager, chief operating officer, CSO; Quality / ISM:
Quality manager, internal auditor, designated person, assistance
On Board Personnel: Nautical officers, engineers, rating, SSO
RISKS AND EMERGENCIES
Emergency Preparedness and Crisis Management

Cyber Security in the Maritime Industry - General Awareness Training

Hacker Detection and Emergency Response Training for IT Administrators

Handling the Media Effectively: The Role of the Spokesperson

HAZOP Leader Course

Marine Insurance and Claims

Maritime Risk Management and Incident Investigation

Media Handling Awareness Course

Media Handling for Shipping Companies

Practical Incident Investigation and Root Cause Analysis - Methods and Tools

Practical Marine Risk Management and Management of Change
Course Objective
Ability to improve a company’s emergency preparedness and control of one’s own behaviour in emergency situations.

Focus Points
- Requirements for contingency planning [SOLAS, ISM, IMO Res. A 852 (20)]
- Requirements for training, drills and exercises
- Tasks and duties of emergency teams on board and ashore
- Behaviour of individuals and teams in high-stress situations
- Dealing with the media and public in emergency situations

Content
In emergencies it is crucial that the right decisions are taken. This workshop introduces methods which allow controlled decision-making under the conditions of great stress. The principles of crisis management are imparted and discussed in case studies and role plays. In particular the influence of the human element of emergency situations is addressed.

Entry requirements
Basic knowledge of contingency planning in shipping

Duration
1 day

Who should attend
Shipping Companies: Superintendents, fleet managers, CSO, designated persons, nautical officers, engineers
Course Objective
The participant will:
- Learn about maritime cyber security regulations
- Understand cyber security terminology in depth
- Recognize malware types
- Be able to identify threats or vulnerabilities
- Learn how to organize awareness measures for own company and eliminate risks from social engineering

Focus Points
- Relevance of cyber security to everyone working in the maritime sector
- Regulations / standards
- Types of attackers and threats (i.e. malware, viruses and spyware, use of removable media (USBs), risks of social networking)
- Motives of attackers and threats
- Incidents already reported – Handling cyber-attacks
- Holistic protective approach
- Fundamentals of detection of cyber-attacks
- Fundamentals of incident management
- Experience input from customer projects

Content
Being protected against accidental or deliberate loss of information from an organization or its customers is a critical factor for any company’s continuing success and survival.

When a company becomes the target of a cyber-attack, the main penetration technique first targets the organization’s users. Due to insufficient understanding by the employees of security risks arising from (not only) internet browsing, this technique is particularly popular with the attackers, having positive results for them and a very negative impact for the targeted company.

This course complies with TMSA 3 element 13 and 13.2.4 KPI/best practice and encourages responsible behaviour by shore-based and vessel personnel towards:
- Locking of unattended work stations
- Safeguarding of passwords
- No use of unauthorised software
- Responsible use of social media
- Control/prevention of misuse of portable storage and memory sticks


DNV GL cooperates with similar-minded partners, ASPIDA Cyber Security, to deliver this vital general awareness training in certain locations.

“(...) raising awareness and addressing a topic that for a long period of time none bothered to address - enjoyable and highly interesting, especially the videos.”
1 February 2018, Lija, Malta

Entry requirements
Basic maritime knowledge

Duration
1 day

Who should attend
All office-based personnel working within the maritime and offshore industries
MARITIME ACADEMY

HACKER DETECTION & EMERGENCY RESPONSE TRAINING FOR IT ADMINISTRATORS

Course Objective
The participants will learn about hacker detection and Emergency Response actions/counter-measures to fight cyber security attacks.

Focus Points
- Information security planning
- Risks and threats
- Attacking methodology
- Security controls
- Web application attacks
- Incident response methodology
- Lab preparation - An Introduction to Back Dooring Operating Systems
- Network investigation tools
- Windows system investigation suites
- Windows advanced tools

Content
The course analyses modern threat detection techniques and appropriate methods of reaction to achieve the best possible management of security incidents in information systems and networks within an organization.
Furthermore, it provides the basic knowledge required by information system administrators in order to be able to detect and deal with first level cyber-attacks received by their supported systems.

During the course practical techniques are presented that can be used by trainees to locate a breach in their organisation’s information systems and networks. The course also includes on-site demonstrations of attacks, system infection and ways to identify infected systems and isolate them and collecting evidence, as well as first level response procedures to address security incidents.

On completing this training program, participants will be fully aware of the threats, understand how a malicious attacker can exploit their system weaknesses, how they can locate a breach in their systems and how to react to a first level incident response.

This course is developed and offered in cooperation with ASPIDA Cyber Security.

This classroom training expands and complements DNV GL’s Maritime Cyber Security Services

Entry requirements
IT Knowledge
Duration
2 days
Who should attend
Senior IT executives, information security officers, system administrators, application administrators
HANDLING THE MEDIA EFFECTIVELY: THE ROLE OF THE SPOKESPERSON

Course Objective
To build confidence and proficiency in media handling and crisis management as a spokesperson for your company.

Focus Points
- Interviews and press releases
- Interview formats and techniques
- How to work with journalists – on-the-spot interviews, being ambushed, personal interviews and press conferences
- Handling the crisis – some basic ground rules
- Conducting an interview without all the facts
- Crisis communication plan (overall strategy) and spokesperson
- Crisis communications and social media
- Training in front of a camera. Preparing for the reality of interviews

Content
Emergency and crisis situations can occur out of the blue at any time so it is really important for every company to have a basic media strategy in place, even if you never need to put it into action.

This is the second course on handling the media and is designed specifically for those employees who are most likely to be involved with the press, both before, during and after an emergency situation, and in particular for the spokespersons.

Methods and tools will be demonstrated to help prepare those responsible for talking to the press and the session will include some live practice speaking in front of a camera.

This module was developed by Katerina Skourtanioti, Director at VENLYS Maritime Specialisation Services: www.venlys.com

Entry requirements
Basic knowledge of contingency planning in shipping

Duration
1 day

Who should attend
Shipping Companies: Owners, managing directors (CEO), chief operating officers (COO), technical directors (CTO), managers, masters, spokespersons
**Course Objective**
This course will provide sufficient knowledge to enable participants to lead efficient HAZOP studies.

**Focus Points**
- HAZOP method for continuous processes
- Roles of HAZOP team members
- Risk ranking and risk matrices
- Preparation for controlling HAZOP studies
- Structured What-If (SWIFT) studies
- HAZOP in control systems
- Comparison of HAZOP with other analysis techniques – when to use what?

**Content**
DNV GL offers a wide range of different training courses related to hazard identification & evaluation techniques.

The most popular "Training course for HAZOP leaders" aims to train employees on the techniques to be used during the hazard identification process, but also focus on the skills needed to prepare and lead HAZOP sessions as well as to control the follow-up process of the recommendations made.

**Entry requirements**
None

**Duration**
3 days

**Who should attend**
The course will be of use to a wide range of disciplines whether in design, development, production, maintenance or a safety/environmental role. People in all these disciplines regularly lead, or are involved in, HAZOP studies. The technique is finding increasingly diverse applications in a wide range of industries.
MARITIME ACADEMY
MARINE INSURANCE AND CLAIMS

Course Objective
- To acquire a better understanding of claims handling and how the marine insurance market operates
- To be able to respond effectively in emergency cases and prevent or mitigate claims through risk analysis and claims management
- To be informed about the latest developments and best practices for prevention in relation to piracy, cyber threats and compliance with the new GDPR Regulation.

Focus Points
- Background to marine insurance
- Legal and practical aspects of the marine insurance covers including Hull and Machinery, P&I, FDD, war risks and charterers liabilities
- GDPR – key changes on processing personal data
- Navigation limits
- Cyber security risks
- Marine claims: collision, GA, salvage, wreck removal, marine pollution, cargo claims and oil pollution
- Places of refuge and maritime refugees
- Enforcement of claims
- Charter party disputes including bunker disputes
- Claims from crew, passengers, shore workers and stowaways

Content
The workshop is designed for those dealing with insurance and claims matters in ship owning and management companies. It aims to give an understanding of the legal and practical aspects of marine insurance and claims management.

The important terms used in marine insurance covers and the requirements for placing the risks will be analysed. Participants will be informed of the latest developments concerning the war risks cover and anti-piracy measures and will be able to recognize the key issues of the new cyber security threats and discuss the changes that the GDPR regulation will bring about.

Through interactive sessions they will be guided how to respond in emergency situations, prevent or mitigate claims through risk analysis and examine how to carry out effective claims management and incident investigation. They will also learn to recognize the importance of evidence collection, claims enforcement and settlement procedures.

This course will be delivered by Mary Pothitos, Paralegal Maritime Services, Athens.

Entry requirements
- None

Duration
- 2 days

Who should attend
- Personnel involved in ship operation and handling insurance and claims
MARITIME ACADEMY

MARITIME RISK MANAGEMENT AND INCIDENT INVESTIGATION

Course Objective
- To familiarize the participants with the key principles of risk assessment and learn how to implement risk management procedures in a maritime organization
- To understand the main aspects of incident investigation and root cause analysis

Focus Points
- Understanding the Concept of Risk
- Requirements for Risk Management
- The Risk Management process
- The “Just Culture” Approach
- Application of Risk Management
- Requirements for Incident Investigation
- DNV GL Loss Causation Model and M-SCAT
- Investigation in Practice
- Learning from Experience

Content
This two-day course is designed for shore and ship staff who want to get a better understanding of the principles of risk assessment and how they are related to the tasks of incident investigation. Participants will learn the step by step approach, starting with hazard identification and working through risk assessment and finally to risk management. Furthermore, they will learn why and how to investigate incidents taking safety management principles into consideration. The course is highly interactive, switching regularly between input sessions using a presentation style and group work where participants will be involved in a variety of different activities (discussing, analyzing, applying, comparing, categorizing, etc.).

Additional two-day courses, one focusing on risk assessment and one focusing on incident investigation are available for those who wish to go deeper into these topics. We strongly recommend that all interested parties start with this foundation level to have a strong base on which to build their knowledge.

Entry requirements
Previous knowledge of codes, best practice guidance or standards applied in the shipping industry e.g. ISM Code and/or TMSA, OVMSA, OHSAS 18001, ISO 9001, ISO 14001

Duration
2 days

Who should attend
Shore and ship staff involved in implementation, maintenance and continuous improvement of a management system, e.g. safety, health, security, environmental and quality managers, operations managers, designated persons, company security officers, superintendents, masters, ship officers and engineers

Others: Personnel of maritime administrations, insurance firms, consultants, engineers
MEDIA HANDLING AWARENESS COURSE

**Course Objective**
To raise awareness and give guidance on how to communicate efficiently with the press, both before, during and after emergencies.

**Focus Points**
- Basic principles of media management
- How the media operates – understanding the media’s attitude and perspective towards the maritime industry
- The cost of losing trust
- Handling the crisis – some ground rules
- Don’t get ambushed – What do you say?
- What makes a good press release?
- Crisis communications and social media

**Content**
Emergency and crisis situations can occur out of the blue at any time so it is really important for every company to have a basic media strategy in place, even if you never need to put it into action.

This course gives participants some first guidance on what to do and what not to do when approached by the press during a crisis.

A second course is available to specifically train those people in your organisation who will be the spokespersons in direct contact with the press.

This module was developed by Katerina Skourtanioti, Director at VENLYS Maritime Specialisation Services (www.venlys.com).

"It is one of the best courses I have ever attended, as it fully satisfied my expectations in terms of trainer’s delivery, material, training method which included a variety of videos as well."

25 January 2018, Piraeus, Greece

**Entry requirements**
None

**Duration**
1 day

**Who should attend**
Shipping Companies: Owners, managing directors (CEO), chief operating officers (COO), technical directors (CTO), fleet managers, designated persons
**Course Objective**
This one day interactive workshop will inform participants about new requirements on shipping media response and provide practical instructions on handling the media, including social media, in order to effectively influence public opinion after a major accident.

**Focus Points**
- New legislation on shipping media response as implemented in the USA
- Emergence of similar legislation around the world (Australia/EU countries)
- How to create a set of key messages to meet the regulatory regimes
- Preparing the required fact sheet and press releases
- Preparing for the compulsory Table Top Exercise
- Getting your messages across clearly to: media/ regulators/ authorities/ government agencies/public interest groups/ pressure groups
- How to use social media effectively to communicate company key messages
- How to prepare for hostile media intrusion
- Working with the US Coast Guard
- Preparing for TV and Broadcast interviews

**Content**
On April 1st 2014 the State of California implemented new shipping media response requirements relating to oil spill prevention and emergency response planning. In future companies must nominate a “Public Information Officer” (PIO) to take part in drills alongside the USCG. This person will act as the official interface coordinating and disseminating information to the media and the public. Similar requirements may be implemented by other states and in other countries.

The new requirements are valid for Marine Facilities, Tank Vessels and Non-tank Vessels alike and include new drill requirements that should take the form of a table top exercise to be performed annually. For shipping companies a shore-based spill management team tabletop exercise shall be conducted annually.


In order to preserve a high quality learning environment, the number of participants in this course is limited to 10.
Course Objective
- To strengthen your skills and enable you to carry out an effective incident investigation
- To get familiar with a wide range of tools and techniques suitable for use in the maritime industry and practice using them.

Focus Points
- Reporting requirements
- The Investigation Process
- Gathering Evidence
- Effective Interview Techniques
- The Human Element
- Timeline and STEP mapping
- Event and causal factor charting
- Fact Tree Analysis
- Root Cause Analysis using M-SCAT
- Incident Analysis Methods

Content
This course is designed for shore and ship staff who want to go deeper into the topic of incident investigation and learn how to apply different methods and tools for root cause analysis. Previous experience of risk assessment and incident investigation, or participation in Maritime Academy’s foundation course “Maritime Risk Management and Incident Investigation” is a pre-requisite for this course.

Participants will learn how to apply incident analysis tools to real cases in order to improve their individual skills. The course is highly interactive, switching regularly between input sessions using a presentation style and group work where participants will be involved in a variety of different activities (analyzing, comparing, categorizing, applying different methods, etc.).

Entry requirements
- Previous participation in incident investigation or risk assessment courses or involvement in related incident investigation or risk assessment tasks

Duration
- 2 days

Who should attend
- Shore and ship staff involved in the continuous improvement of the company’s management system, e.g. safety, health, security, environmental and quality managers, operation managers, designated persons, company security officers, superintendents, masters, ship officers and engineers
- Others: Personnel of maritime administrations, insurance firms, consultants, engineers
Course Objective

- To gain a better understanding of the philosophy behind risk management as per ISO 31000:2018
- To get an overview on the various methods used to conduct risk analysis, risk assessment and risk management
- To become more familiar with the management of change framework and processes
- To practise the application of a risk-based approach in the management of change process

Focus Points

- Benefits of risk management
- Risk management levels in maritime industry
- Job Safety Analysis
- Toolbox Meeting
- Last Minute Risk Assessment
- Risk assessment methods (FMEA, HAZOP, SWIFT, Checklists, Fault Tree and Event Tree)
- Management of change framework
- Documenting management of change process

Content

This course is designed for shore-based and shipboard staff who want to go deeper into the topic of risk management and get familiar with the wide range of methods and tools that may be used. Previous experience of risk management, incident investigation or participation in Maritime Academy’s foundation course “Maritime Risk Management and Incident Investigation” is highly recommended.

Participants will learn how to apply risk assessment methods at the different operational levels. Management of change process best practices are described as per industry standards. The steps of the process including application of risk assessment methods are practised using realistic scenarios.

This course is conducted in a highly interactive workshop style, switching regularly between input sessions with presentations and group work, where participants will be actively involved in a variety of practical tasks.

Entry requirements

Previous participation in risk management or incident investigation courses or involvement in related risk assessment or incident investigation tasks

Duration

2 days

Who should attend

Shore and ship staff involved in the continuous improvement of the company’s management system, e.g. QHSE managers, operation managers, designated persons, company security officers, superintendents, masters, ship officers and engineers. Project managers responsible for management of change process

Others: Personnel of maritime administrations, insurance firms, consultants, engineers
MARITIME ACADEMY

MARITIME CYBER SECURITY AWARENESS E-LEARNING

Address your greatest cyber security vulnerability

We can help you with the first essential steps in building up your cyber security defences. Train your staff and crews using easily accessible e-learning.

Address the human factor in cyber security

Cyber-attacks have increased exponentially over the past few years - also in the maritime industries. And they can have a major impact on all critical maritime infrastructures and IT components/assets. Although human failure is the most often reason for any cyber security incidents maritime cyber security awareness is currently low.

You can now get an e-learning course for your crews (and shore staff) to raise awareness concerning cyber security - what are typical cyber-attacks and how do they contribute to your company’s cyber security.

The course

Four training modules outline the role of each individual in preventing breaches of cyber security and mitigating damage in the event of a successful cyber-attack. With the tool, the users will understand how changing their behaviour can make a real contribution to cyber security.
Understanding ISM

Behaviour Based Safety

Handling and Transport of Dangerous Goods (IMDG Code Training)

Maintenance of Life-Saving Appliances and Fire-Fighting Equipment on Board Seagoing Ships

Designated Person Ashore (DPA) Training Course
**Course Objective**
Participants will gain basic but comprehensive knowledge on the ISM Code and understand the principles and functional requirements of a related Safety Management System (SMS).

**Focus Points**
- Background and the vision of the ISM Code
- Introduction to the 16 elements of the ISM Code
- Functional requirements for a SMS
- Understanding the system of internal and external verification
- Interpretations and requirements of major flag States

**Content**
Since the ISM Code became mandatory, both shipping companies and ships are required to have in place an audited Safety Management System (SMS).

The course deals with the requirements of the ISM Code and how to implement and maintain an effective SMS.

During this course the background and the underlying philosophy of the Code as well as the obligations and responsibilities of the different parties involved are explained. The various elements of the code are presented, as well as any important amendments.

Advice on risk management and the operation of a safety culture are provided. The requirements for internal audits and the system of external verification are outlined and case studies are used as a basis for discussions on problem areas.

This course is a good preparation for those who will later assume the role of an internal auditor.

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**Entry requirements**
Basic maritime knowledge

**Duration**
1 day

**Who should attend**
Shipping Companies: Nautical officers, engineers, ratings, assistants (management, inspection, quality/ISM), internal auditors
Course Objective
After participating in this course you will have gained a broad understanding of how seafarer’s behaviour can affect safety and appreciate the benefits of implementing a quality BBS policy in your company.

Focus Points
- The generic structure of BBS
- The various tools of BBS
- Identifying safe and unsafe behavior
- Motivating seafarers towards safe behavior
- Critical error reduction techniques
- Safety intervention techniques
- Different ways to introduce BBS in your organization

Content
Safety research, over the last century, has revealed that human error is the prime contributing factor to the majority of casualties in the maritime industry. From the accident of the Titanic to that of the Costa Concordia, it seems that seafarers are apt to behave according to the “wrong” mental model during critical situations.

Although the introduction of new technology in the shipping industry aims at improving a ships’ competitiveness and reducing the occurrence of unwanted incidents, seafarers seem not to follow the same rhythm of evolution, due to human limitations.

BBS is a modern answer to this challenge in the maritime domain. It is an evolving process that uses positive reinforcement to change unsafe behaviour on the part of the individual and improve safety performance, as part of a positive safety culture.

In this course you will work through the full scope of BBS to optimize your own attitude and behavioural style which can make a real difference in terms of enhancing safety in critical situations.

Entry requirements
None

Duration
1 day

Who should attend
On shore and on board personnel involved in operations, maintenance and other support areas. Furthermore, safety practitioners, safety specialists, human resources managers can highly benefit from this course.
**Course Objective**
Participants will understand the purpose of the IMDG code and know how to refer to it in order to comply with the IMDG regulations dealing with the classification, packing, handling, carriage, stowage and segregation of various classes of dangerous goods.

**Focus Points**
- Overview of relevant local, national and international regulations
- SOLAS, MARPOL, ISPS, CSC Convention
- All sections of the IMDG Code (2016 edition)
- Classes, Divisions and Packing groups
- Legal responsibilities of Shippers (incl. ADR in EU)
- CTU (Cargo Transport Units), marking, labeling and placarding
- Stowage and segregation
- Security Provisions

**Content**
This course aims to create General Awareness and Familiarization with the **IMDG Code 2016 Edition – incorporating amendment 38–16**, by imparting knowledge related to hazards involved in the carriage of dangerous goods to individuals that will effectively contribute to the safe carriage of these goods at sea.

It meets the general awareness/familiarisation training requirements mentioned in IMDG Code (Chapter 1.3) as well as CFR 49 (Transportation) and STCW sections A-II/1 and A-II/2. It is intended for training all persons engaged in the transport of dangerous goods by sea, particularly seafarers and shore-side personnel.

The IMDG code is the key instrument regulating the transport of dangerous goods by sea and this course seeks to clarify how the code is to be used and the practical purpose the code aims to achieve.

It contains both practical and theoretical work with the regulations for the transport and handling of dangerous goods and examines the implementation of the regulations into national legislation.

Depending on the course location participants may also receive additional information enabling them to work with local regulations concerning transport by road and rail (ADR/RID).

**Entry requirements** None
**Duration** 2 days
**Who should attend** All persons involved in the transport of dangerous goods intended to be transported by sea
Course Objective
Participants will gain thorough knowledge on the applicable provisions which are to be implemented in the operational maintenance routine on board.

This course will qualify participants to be competent contact persons within the company’s operation ashore and on board the ships, as well as in corresponding port state matters and for companies providing surveys and maintenance services.

Focus Points
- Legal framework on maintenance of life-saving appliances and fire-fighting equipment
- Specials of flag state administrations and other particularities
- Equipment, appliances and systems subject to specific maintenance requirements
- Interpretation and practical application of the rules and regulations
- Documentation required on board
- Tools and information available
- Examples on scope of maintenance for fixed firefighting systems

Content
This module provides an overview on the legal framework and gives advice on the practical implementation of provisions for the maintenance of life-saving appliances and fire-fighting equipment on board seagoing ships.

The applicable international minimum standard to be met, additional requirements adopted by individual flag state administrations and provisions imposed by classification societies are introduced.

Equipment, appliances and systems subject to specific statutory or class maintenance requirements are identified, also in terms of on board maintenance and service to be provided by shore-based service suppliers.

By means of practical case studies the presented material is discussed and the participant’s knowledge is broadened.

The scope of maintenance exemplarily illustrated for selected fixed fire-fighting systems completes this module.

Entry requirements
Knowledge of ship operation

Duration
0.5 days

Who should attend
Shipping Companies: Superintendents, fleet managers, quality managers, designated persons, nautical officers, engineers
MARITIME ACADEMY

DESIGNATED PERSON ASHORE (DPA) TRAINING COURSE

Course Objective
- To provide comprehensive training related to the implementation and maintenance of a company’s SMS in compliance with the requirements of the ISM Code.
- This course fulfills the IMO MSC-MEPC.7/Circ.6 “Guidance on the qualification, training and experience necessary for undertaking the role of the Designated Person under the provisions of the ISM Code.”

Focus Points
- Requirements of the DPA in the 21st century
- Principles of modern management systems
- Knowledge and understanding of the ISM Code
- Handling of mandatory rules and regulations
- Assessment techniques
- Technical and operational aspects of safety management
- Understanding operations of a shipping company
- Requirements for marine-related management system audits
- Ensuring effective communication with shipboard staff and shore management

Content
According to the ISM Code the Designated Person Ashore (DPA) plays a key role in the effective implementation of a Safety Management System and takes responsibility for verification and monitoring of all safety and pollution prevention activities. To comply with the ISM Code a shipping company should be able to provide documentary evidence that the DPA has received sufficient training to undertake the necessary duties.

In this course the participants will be fully prepared to assume the role of DPA. This means providing them with the knowledge, understanding and skills necessary to implement and maintain the company’s SMS as required by the ISM Code.

During the course the participants will be reminded about the background and objectives of the ISM Code and the resulting requirements for the company’s SMS from a modern management perspective. The responsibilities and authority of the DPA, possible legal exposure, as well as other potential difficulties will be explained. Advice is provided on principles and systematics of risk management and incident investigation.

Special attention is given to the importance of the human factor and good communication in safety management. Modern management concepts are presented. Activities are included to develop the capabilities of the participants in performing the duties, tasks and responsibilities of the DPA. Achievement of the required level of competence is assessed by means of a final test.

Entry requirements
Sound experience in shipping and ship operations and good knowledge of the ISM Code

Duration
2 days

Who should attend
Shipping Companies: Superintendents, quality managers, designated persons, nautical officers, engineers
SECURITY
Understanding ISPS

Company/Ship Security Officer (CSO/SSO) Training Course

Port Facility Security Officer (PFSO) Training Course

Security Awareness Training for all Seafarers

Security Awareness Training for Seafarers with Designated Security Duties
**Course Objective**
Gaining basic knowledge of the relevant ISPS Code requirements and understanding on board security management.

**Focus Points**
- Information about the background and mandatory requirements of SOLAS and the ISPS Code
- Introduction to the elements of the ISPS Code
- Basic knowledge regarding the performance of security assessments
- Information about internal/external verifications and the certification procedure
- Necessity of security awareness and vigilance

**Content**
The module deals with the requirements of the International Ship and Port Facility Security (ISPS) for shipping companies, shipping personnel and maritime authorities.

The participants will learn the required steps for establishing a Ship Security Plan (SSP), the methods generally used for its implementation and maintenance on board and the procedures for certification. General principles of security are explained with practical examples.

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**Entry requirements**
Basic maritime knowledge

**Duration**
1 day

**Who should attend**
Shipping Companies: Internal auditors, nautical officers, engineers, ratings, assistants (inspection, quality/ISM)
MARITIME ACADEMY
COMPANY / SHIP SECURITY OFFICER (CSO/SSO)
TRAINING COURSE

Course Objective
Provision of internationally recognised training for qualification as:
- Company Security Officer (CSO) in accordance with the standard of competence as outlined in the Guidelines on Training and Certification for Company Security Officers issued as Annex of MSC/Circ.1154 and the IMO Model Course 3.20;
- Ship Security Officer (SSO) in accordance with the Mandatory Minimum Requirements for the Issue of Certificates of Proficiency for Ship Security Officers, set out in section A-VI/5, paragraphs 1 to 4 of the STCW 78, as amended and the IMO Model Course 3.19.

Focus Points
- Development, implementation, maintenance and supervision of Ship Security Plans
- Identification of threats and vulnerabilities and assessment of security risks
- Methods for Inspection and Monitoring of security measures on board ships
- Operation, testing and calibration of security equipment and systems
- Enhancing security awareness and vigilance of company staff (ship and shore)

Content
The course provides participants with the knowledge, understanding and proficiencies as required by STCW 78, as amended and the ISPS Code to undertake the tasks, duties and responsibilities as Company Security Officer (CSO) or Ship Security Officer (SSO). Practical case studies, exercises and videos are used to illustrate possible measures to comply with the maritime security requirements as laid down in the ISPS Code. Achievement of competencies is assessed by means of a final test.

Note:
Our course is accepted by relevant flag states but not by the British Maritime and Coastguard Agency (MCA). For MCA approved SSO or CSO training, please contact your closest Maritime Academy office. The Training Certificate is recognized by major flag States as precondition for the issuance of a Certificate of Proficiency (CoP) as Ship Security Officer.

Entry requirements
Maritime security knowledge
Participants aiming for a certificate of proficiency as ship security officer shall have approved seagoing service of not less than 12 months or appropriate seagoing service and knowledge of ship operations (STCW 78, as amended, Reg. VI/5).

Duration
3 days

Who should attend
Personnel involved in security matters coming from shipping companies (Designated Person (ashore), Company Security Officer, quality manager, operation manager, nautical- and technical superintendent and officer, internal auditor, master, Ship Security Officer) and maritime administrations/agencies, ship chartering, insurance and security companies
Course Objective
Internationally recognised qualification as Port Facility Security Officer (PFSO).

Focus Points
- Understanding the ISPS Code
- Assessment of security risks, threats and vulnerability
- Developing, maintaining and supervising the implementation of a Port Facility Security Plan (PFSP)
- Conducting periodic inspections of the port for which the participant is designated to act as the Port Facility Security Officer to ensure appropriate security measures are implemented and maintained
- Ensuring that security equipment and systems, if any, are properly operated, tested and calibrated
- Encouraging security awareness and vigilance
- Identifying weapons and improvised explosive devices
- Security training, drills and exercises

Content
This module provides the participants with comprehensive knowledge to enable them to take on the duties and responsibilities as defined in the International Ship and Port Facility Security (ISPS) Code.

Practical case studies are used to illustrate possible measures to comply with the maritime security requirements.

Note:
This course meets the requirements of the ISPS Code and the requirements specified in the IMO Model course 3.21 (2015 ed.) for Port Facility Security Officers.

"Very interactive, great opportunity to learn more about maritime security, lot of real events were shared. Great job of the trainer."
5-7 December 2017, Luanda, Angola

Entry requirements
Basic knowledge of port operation and basic security awareness on Port Facilities

Duration
3 days

Who should attend
PFSO
**Course Objective**
Provision of internationally recognised training to achieve the standard of competence and level of knowledge required to contribute to the enhancement of maritime security through heightened awareness and the ability to recognize security threats and to respond appropriately.

**Focus Points**
- The meaning and the consequential requirements of the different security levels
- Knowledge of emergency procedures and contingency plans
- Recognition and detection of weapons, dangerous substances, and devices
- Recognition, on a non-discriminatory basis, of characteristics and behavioural patterns of persons who are likely to threaten security
- Techniques used to circumvent security measures

**Content**
The course provides participants with the knowledge required to enable personnel without designated security duties in connection with a Ship Security Plan (SSP) to enhance ship security in accordance with the requirements of Chapter XI-2 of SOLAS 74 as amended, the ISPS Code, and section A-VI/6-1 of the STCW Code, as amended.

Interactive training methods are used to ensure communication of the required knowledge, understanding and proficiency.

Achievement of competence is assessed continuously during the course and by means of a final test.

<table>
<thead>
<tr>
<th>Entry requirements</th>
<th>Commencing seagoing service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>1 day</td>
</tr>
<tr>
<td>Who should attend</td>
<td>Seafarers or other shipboard personnel who will not be assigned specific security duties in connection with the Ship Security Plan; shore-based personnel involved in ship security</td>
</tr>
</tbody>
</table>
Course Objective
Provision of internationally recognised training to achieve the standard of competence and level of knowledge required to undertake the tasks, duties and responsibilities assigned under the Ship Security Plan.

Focus Points
- Maintain the conditions set out in a Ship Security Plan
- Recognition of security risks and threats
- Undertake regular security inspections of the ship
- Proper usage of security equipment and systems

Content
The course provides participants with the knowledge required for seafarers with designated security duties in connection with a Ship Security Plan (SSP) to perform their duties in accordance with the requirements of Chapter XI-2 of SOLAS 74 as amended, the ISPS Code, and section A-VI/6 of the STCW Code, as amended. Interactive training methods are used to ensure communication of the required knowledge, understanding and proficiency.

Achievement of competence is assessed continuously during the course and by means of a final test.

Entry requirements
Until 1st January 2014, seafarers with designated security duties who commenced an approved seagoing service prior to this date shall be able to demonstrate competence to undertake the tasks, duties and responsibilities listed in column 1 of STCW table A-VI/6-2 by:

- approved seagoing service as shipboard personnel with designated security duties, for a period of at least six months in total during the preceding three years; or
- having performed security functions considered to be equivalent to the seagoing service; or
- passing an approved test; or
- successfully completing an approved training course

Duration
2 days

Who should attend
Seafarers or other shipboard personnel, such as armed guards, likely to have designated security duties in connection with the Ship Security Plan, shore-based personnel involved in ship security
SHIP TECHNOLOGY
Maritime Battery Systems Introduction Course

Ship Technology Basics

Hull Structure Course - Oil Tankers and Bulkers

LNG as Ship Fuel

Low Sulphur Fuel - Basics & Experience

Machinery Course

Planning and Managing a Drydocking for Superintendents
The main purpose of the course is to give an introduction to maritime battery systems and give an overview of possibilities and challenges for hybrid and all electric propulsion in maritime power plants.

Focus Points
- Why battery systems in the maritime sector?
- Battery basics with focus on Li-ion technology
- Main factors for a safe and cost effective battery system
- Class requirements for battery systems
- Risk analyses
- Technical, economic and environmental related analyses

Content
The course will focus on important aspects for implementing battery systems onboard ships in a safe, economical and effective way.

Entry requirements
None

Duration
1 day

Who should attend
Technical staff and management at ship-owners, yards, suppliers, ship designers, consultants, research and other organizations within the maritime cluster
Course Objective
Participants will gain knowledge about basic technical processes on board and an impression of the overall ship system.

Focus Points
- Propulsion machinery
- Auxiliary machinery
- Cargo equipment and systems
- Safety equipment
- Navigational and deck equipment

Content
The module is directed at newly employed or laterally hired personnel in the maritime industry without prior technical knowledge.
The functioning of combustion engines and other important components on board will be explained and presented in the context of ship operations.
In addition, an overview of loading operations, safety equipment as well as navigation and deck equipment will be provided.
Practical case studies are used throughout.

Entry requirements
Basic maritime knowledge

Duration
2 days

Who should attend
Shipping Companies: Assistants (management, inspection, quality/ISM)
Course Objective
The purpose of this course is to improve the quality of your hull inspections and your ability to evaluate the criticality of structural defects. During the three days you will learn about the basic functions of a ship’s hull. Throughout the course, you are introduced to basic strength theory in a way that is simple but suitable for understanding the structural response of complex ship structures.

Focus Points
- Basic hull strength and loads
- Simple beam theory
- Structural connections in a ship structure
- Hull structure failure types such as cracks /fatigue, buckling, indents and corrosion

Content
In a world where the acceptance of hull damage and accidents in general is significantly reduced, there is an increasing need for high quality shipping operations. This calls for improved inspections and for better ship maintenance. This can only be achieved through improved understanding among the individuals responsible for such maintenance.

In order to meet these needs, DNV GL has developed the Hull Structure Course. The course will increase your understanding of the structural configuration and response of ship structures.

After the first day which covers the basic theory of hull strength and loads, the following days look at ship-type specific issues for Oil tankers and bulkers including typical causes of damage and proposed repairs.

Entry requirements
Basic knowledge of ship structures

Duration
3 days

Who should attend
Technical managers, fleet managers, superintendents
Course Objective
The course will give the participants an overview about the current developments in the field of LNG as ship fuel.

Focus Points
- Applicable rules and regulations
- Safety challenges and associated risks
- Principles and components of typical LNG fuel systems
- Ship type considerations

Content
The introduction of stricter local, national and international environmental legislations demands new solutions for fuels within the maritime industry. One possible approach to meet the emission requirements is to use natural gas as fuel for propulsion and electric power generation on board.

Until recently, there was a lack of international safety requirements for gas as fuel for non-LNG tankers. However, on 1 January 2017 the IGF-Code (International Code of Safety for Ships using Gases or other Low-flashpoint Fuels) entered into force. This Code provides mandatory provisions for the arrangement and installation of low-flashpoint fuelled machinery.

DNV GL has recently updated its Rules to include all statutory requirements (except risk assessment, operational requirements and training). Our Rules provides clear and prescriptive criteria together with function-based requirements enabling more innovative solutions.

While exploring the details of typical LNG fuel systems this course will show how safety challenges and associated risks are mitigated through applicable rules and regulations. The course aim to engage technical personnel through discussions and challenging cases giving them a better understanding of LNG as ship fuel.

With over 15 years of experience with gas fuelled vessels DNV GL can be considered your trusted partner preparing ships for LNG fuel in a safe and sustainable manner.

Entry requirements
Basic maritime knowledge

Duration
1 day

Who should attend
Technical personnel within shipping companies, yards and designers (e.g. engineers, technical directors, fleet managers, superintendents etc.)
Course Objective
Participants will gain thorough knowledge for managing the international requirements concerning sulphur reduction for ship new buildings and ships in service.

Focus Points
- Keeping the ship in-line with new international requirements while maintaining safe and profitable operational conditions and avoiding damage to machinery
- Avoiding fines and port state detentions by knowing the actual regulations
- Being able to design, to construct and to inspect a ship respecting the newest international regulations

Content
The statutory requirements for reduction of sulphur emissions in international seafaring are made known to the participants.

Fuel with reduced sulphur will influence various installations and components on board.

Practical examples and experience are given during the course. Practical case studies are used to deepen understanding and trigger more detailed discussion.

Entry requirements
Basic knowledge of maritime rules and regulations

Duration
0.5 days

Who should attend
Shipping Companies: Management: Technical director (CTO), managing director (CEO), assistance; Inspection: Superintendent, fleet manager, chief operating officer,
On Board Personnel: Nautical and technical officers, engineers
Yard: Management: Technical director (CTO), managing director (CEO), assistance; Design: Design manager, engineers (naval architects, mechanical engineers, project engineers);
Production: Production manager, engineers
Supplier (M&C): Management: Vice president, technical director (CTO), managing director (CEO), HR manager, assistance; Engineers: Engineers
Course Objective
It is assumed that the target group holds significant competence prior to the course, and many issues must be seen as clarifications, refreshing and updates. Upon completion of this course, the participants should, in general terms, know the role of Class and how Class works in relation to machinery, and they should know how to find related information through DNV GL Exchange. Common damages and possible repair methods will also be covered.

Focus Points
a. Class Systematics/Machinery
   - General Class systematics and follow up of Class Machinery Survey Arrangements
   - General about DNV Exchange, focus on new features
b. DNV’s 4 Machinery Survey Arrangements
   - Machinery Renewal
   - Machinery Continuous
   - Planned Maintenance System
   - Condition Monitoring
   - Tips and challenges related to Machinery PMS
c. Boilers
   - Introduction to Boilers
   - Principles of evaporation, water treatment, material properties
   - Most common failure modes
   - Survey preparation and safety measures
d. Hot topics (New topics developed continuously)
   i. Engine Room Fires
   ii. SOLAS/class requirements and how to comply with them
   - EIAPP and NOx certification
   - Low Sulphur requirements
e. Propellers
   - Survey inspection
   - Damages and repairs
f. Use of 2nd Hand Components
   - DNV GL policy and practical tips
g. Bearings
   - Different types of 4 stroke engine bearings
   - How to evaluate bearing condition examples
   - Bearing failure modes, latest developments

Content
DNV GL has noted an increasing demand for knowledge and understanding of Class’s role and responsibilities with regards to machinery. Class and ship management can work together to secure safe and efficient operation of machinery systems, and with the correct machinery survey arrangement in place, sophisticated maintenance strategies can be combined with Class surveys.

Entry requirements
None
Duration
3 days
Who should attend
The course is aimed at all technical personnel involved in ship and rig management and operation. In particular superintendents and chief engineers will benefit from this course.
Course Objective

Too many docking projects end with major cost overruns and delays, wasting both time and money for the shipowner. This course enables the participants to plan and manage a docking project from A to Z and re-deliver the ship on time and on budget with the right level of quality to ensure carefree future operation.

Focus Points

- Planning
- Project management and control
- Project risk management
- Cost control
- Contract
- Quality
- Safety
- Repair Specification
- Tendering
- The practical phases of a docking project
- Pitfalls
- Final invoice negotiations
- Undocking and departure
- Best practices, software tools and templates
- Practical, relevant cases

Content

Planning and managing a drydocking is very different from a superintendent’s daily work, which typically consists of juggling a myriad of urgent issues. A drydocking is a specific task conducted over a concentrated timeframe and requires a different project-based approach. This course will enable the participants to plan and manage such major projects, including how to handle the risks.

This three-day practical course starts with an introduction to drydocking as well as general project management topics. It then takes participants through the entire practical process from the planning and pre-arrival stages to the actual docking and repair. The course ends with the oft neglected task of capturing the knowledge and data generated in a post-docking report.

When things go wrong during a docking project the cause always lies with poor planning, which opens the door to technical surprises. This course therefore covers such potential surprises in detail.

Designed in close co-operation with many shipping companies, and drawing on many years of practical experience within the international shipping industry, the course is highly interactive and encourages a lively exchange of ideas and experiences for the mutual benefit of all attendees.

Entry requirements

None

Duration

3 days

Who should attend

Superintendents, fleet managers, senior management, officers and engineers
SHIP TYPES
Course Objective
To provide up to date information about the regulatory framework for the ship type segment Bulk Carrier. To support participants involved in the evaluation process for prompt investment and operating cost calculations, and simplify decision-making processes.

Focus Points
- Regulatory framework for bulk carriers
- IMO Conventions and Codes (e.g. SOLAS, MARPOL, Load Line, Grain Code, ESP, IMSBC Code)
- Regional and national regulations (e.g. EU Directives)
- IACS (Unified Requirements, Interpretations Recommendations, Common Structural Rules
- DNV GL Rules and Guidelines and DNV GL services for bulk carriers
- Technical and operational consequences
- Market information

Content
This module introduces the current regulatory framework for bulk carriers and considers its future amendments. The consequences of these requirements on the operation of ships and their construction will be discussed. Information on current market development in the shipping sector enhances the knowledge gained.

Entry requirements
Experience in the bulk carrier shipping segment

Duration
1 day

Who should attend
Shipping Companies: Superintendents, fleet managers, quality managers, designated persons, nautical officers, engineers, ratings, assistants (inspection)
**Course Objective**
Participants will be gaining expertise about current design and operational aspects.

**Focus Points**
- Construction and equipment of container ships
- Cargo securing and stowage
- Technical solutions for ballast water exchange
- Hazards during ship operation

**Content**
The participants receive an overview of the development of container ships as well as the special concepts of ship design. This knowledge is complemented by operational aspects concerning container ships.

Practical case studies are used to enhance the presented material.

**Entry requirements**
Basic knowledge of maritime regulations

**Duration**
1 day

**Who should attend**
Shipping Companies: Superintendents, fleet managers, quality managers, designated persons, nautical officers, engineers, ratings, assistants (inspection)
Course Objective
The course is intended to provide participants with basic understanding of the LNG market, ship types, cargo containment systems and the operational and safety aspects of the transportation of LNG cargoes by sea.

Focus Points
- Trends in LNG shipping
- Ship types and cargo containment systems for LNG
- Construction of GTT Mark III
- Construction of GTT NO96
- LNG Cargo equipment and operations
- Special systems and operations for membrane carriers
- Propulsion alternatives for LNG carriers
- Regasification vessels
- Testing of Mark III secondary barriers

Entry requirements  None
Duration  1 day
Who should attend  Superintendents, senior officers on board
Course Objective
This course explains the basics behind the Liquefied Petroleum Gas (LPG) Carriers industry, their operation, applicable statutory and special requirements including safety related matters concerning type of cargo grades, etc.

Focus Points
- Gas basics
- Key operational points / Steps from dry-dock until discharging
- Cargo handling (Loading/Discharging Pre-Planning)
- Cargo handling equipment
- Change of grades, precautions that should be taken into account
- Safety procedures, Emergency Shut Down (ESDS)
- Safety sensors, controlling equipment
- Custody transfer system (gauging / measurement / temperature & pressure control-monitoring)
- Identification of hazards
- Dangerous zones
- Material used in cargo tanks and piping

Content
Participants will gain a deep and qualitative understanding of the 'Liquefied Petroleum Gas (LPG)' sector and related IMO Convention and IGC Code.

Practical and theoretical case studies will contribute to enrich the comprehension of LPG Cargo Handling Operations and all safety related matters.

Entry requirements
None

Duration
2 days

Who should attend
Personnel in operations, technical departments responsible for LPG, Ethylene/VCM, Ammonia Carriers, superintendents, ships’ officers, newbuilding project managers
MARITIME ACADEMY

OIL AND CHEMICAL TANKERS – TECHNICAL AND OPERATIONAL ASPECTS

Course Objective
Participants will gain expertise in technical and operational aspects of tankers in fleet service as well as the system of maritime regulations that especially apply to oil and chemical tankers in the fields of ship security and protection of the marine environment.

Focus Points
- Tanker types, design and construction
- Relevant organisations and regulations concerning tankers (e.g. IMO, IACS, OCIMF, SOLAS, MARPOL, IBC Codes)
- Plan approval, newbuilding supervision, surveys and certificates
- Technical and operational aspects (e.g. cargo operation, tank cleaning, ballast operations, environmental aspects)
- Safety aspects (e.g. gas-freeing of cargo tanks, tank inspection, fire protection and firefighting)

Content
Participants are given an overview of current and future developments, and aspects in tanker operation and amendments to IMO conventions, as well as IACS requirements. Practical case studies derived from ship operation are used to enhance the presented material. In addition, revised MARPOL Annex II and IBC Code and their impact and consequences on the fleet are dealt with.

Entry requirements
Basic knowledge of the shipping industry and maritime regulations

Duration
1 day

Who should attend
Shipping Companies: Superintendents, fleet managers, quality managers, designated persons, nautical officers, ratings; Yard: Design managers, engineers (naval architects), production managers, engineers; Material and Components: Engineers
SURVEY SIMULATOR COURSES

Dry Docking

Hull Inspection and Repairs

Hull Inspection using 3D Simulator (Bulk carriers)

Hull Inspection in a Nutshell

Hull Inspection using 3D Simulator (Oil tankers)

Inspection of Engine Room Condition and Safety for Captains

ISM in Practice for Crew

Machinery Surveys and Damage

Newbuilding Hull Inspection

PSC Top Deficiencies in Practice
Smart Use of Class - Explore the Benefits

Statutory Inspections - SOLAS, Load Line, MARPOL

Superintendent Course - Survey Simulator Practice

ISM Internal Auditor
SurveySimulator, is an innovative software solution helping to train people to carry out visual inspections in a more comprehensive, efficient and safe way.

SurveySimulator makes practical training possible without leaving the classroom.

Thousands of deficiencies placed on virtual vessels are available for training purposes.

Deficiencies are both safety-related and of a technical nature. The deficiencies are based on DNV GL’s global inspection experience from hundreds of real-life inspections carried out every year.

SurveySimulator features high reality 3D Models

- Four detailed 3D models of vessels are available for realistic survey simulations.
- Every vessel in SurveySimulator is a reflection of a real ship or structure. With extreme care, our specialists designed every single detail from the hull structure to the smallest screw.
- Each vessel includes several survey areas (spaces, tanks, etc.) – typical for that ship type.
Course Objective
The purpose of this training is to prepare you for dry docking of ships, improve the quality of your inspections of underwater part of ships and improve your ability to evaluate the criticality of defects and properly plan repairs. During the course you will learn about the typical hull and machinery damages found during dry dockings.

Focus Points
- Ship’s hull global and local strength
- Bottom survey schemes and schedules
- Preparation to dry docking
- Ultrasonic Thickness Measurements (UTM)
- Damages to underwater part of hull
- Rudder damages
- Propeller and propeller shaft damages
- Acceptance criteria
- In-water bottom survey
- Interactive exercises using Survey Simulator

Entry requirements
None

Duration
2 days

Who should attend
Technical managers, fleet managers, superintendents, ship officers and engineers, ship repair yards technical staff, hull inspectors, hull designers, UTM operators, any ship or shore technical staff
**Course Objective**
The purpose of this training is to improve the quality of your hull inspections, enhance your ability to evaluate the criticality of structural defects and improve reporting skills.

During the course you will learn the basic functions of a ship’s hull.

Through the course, you are introduced to the basic strength theory in a way that is simple but suitable for understanding the structural response of complex ship structures.

Ship-type specific modules discuss structural functions and typical hull damages.

**Focus Points**
- Simple beam theory and global hull strength
- Structural connections - transfer of forces between structural elements
- Hull damages: Cracks, indents, buckling, corrosion
- Acceptance criteria
- Material’s issues
- Reporting principles
- Corrosion prevention
- Interactive exercises using Survey Simulator

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**Entry requirements**
None

**Duration**
3 days

**Who should attend**
Technical managers, fleet managers, superintendents, ship officers, ship repair yards technical staff, hull inspectors, hull designers
Objective
Upon completion of this course the participants will have an understanding of ship’s hull structure and its response to different loads; be able to identify critical areas and carry out good inspections of typical hull compartments.

Focus Points
- Why hull inspections carried out by the owners are so important
- Simple beam theory
- Loads acting on ship’s hull and its response
- Critical areas
- Typical hull damage and repairs

Entry requirements
None

Duration
1 day

Who should attend
Ship officers, ship repair yards technical staff, junior superintendents
Course Objective
The benefits of this course for the participants are:
- Enhanced safety awareness
- Better planning of inspection
- Understanding of critical areas
- Proper assessment of hull damage
- Controlled shore-based decision making
- Uniformity of reporting
- Smoother co-ordination with class

Focus Points
- Preparation
- Reporting
- Areas of attention
- Typical kinds of damage
- Repair procedures
- Lessons learned from experience
- Interactive inspection with 3D Survey Simulator

Content
The course teaches basic knowledge related to the hull structure of bulk carriers and aims to improve the participants’ understanding of the same, having a positive effect on how inspections are carried out as part of the owner's own inspection scheme and in connection with class surveys.

This course offers a combination of lectures, videos, group discussion and test cases.

The unique feature of this course is the interactive inspections with the use of a 3D Survey Simulator program which enables the participants to retain a much higher degree of knowledge than through common "show-and-tell" techniques.

Entry requirements
None

Duration
1 day

Who should attend
Shipboard and shore-based personnel involved in hull inspections and maintenance
**Course Objective**
The course teaches basic knowledge related to the hull structure of oil tankers and aims to improve the participants’ understanding of the same, having a positive effect on how inspections are carried out as part of the owner’s own inspection scheme and in connection with class surveys.

**Focus Points**
- Preparation
- Reporting
- Areas of attention
- Typical kinds of damage
- Repair procedures
- Lessons learned from experience
- Interactive inspection with 3D Survey Simulator

**Content**
The benefits of this course for the participants are:
- Enhanced safety awareness
- Better planning of inspection
- Understanding of critical areas
- Proper assessment of hull damage
- Controlled shore-based decision making
- Uniformity of reporting
- Smoother co-ordination with class

This course offers a combination of lectures, videos, group discussion and test cases. The unique feature of this course is the interactive inspections with the use of a 3D Survey Simulator program which enables the participants to retain a much higher degree of knowledge than through common "show-and-tell" techniques.

**Entry requirements** None
**Duration** 1 day
**Who should attend** Shipboard and shore-based personnel involved in hull inspections and maintenance.
Course Objective
This course is aimed at high quality and efficient inspection of ER safety, required to be carried out by the master of a vessel. The knowledge is useful also for ship owner’s shore staff, ISM auditors and deck senior officers.

Content
During the course all participants – masters or experienced deck officers – after a short familiarization with Survey Simulator will carry out inspection of an engine room on individual computer stations. Deficiencies found will be documented by taking pictures of them. Once inspection is finished, participants will present their findings on a big screen. Reasons, impact on safety, compliance with relevant rules, possible consequences, rectification method and corrective/preventive action will be under discussion, guided by the trainer. At the end of the session, re-inspection of the same ER, but with different findings or located in different places will be carried out in order to consolidate and check the knowledge gained.
Course Objective
Course objective is to explain to ships’ officers the advantages and importance of Safety Management System (SMS) and engage them in its implementation, maintenance and continuous improvement on board their ships.

Participants will gain basic but comprehensive knowledge on the ISM Code and understand the principles and functional requirements of a related SMS.

Focus Points
- Background and the vision of the ISM Code
- Introduction to the ISM Code
- Functional requirements for SMS
- Understanding and participation of all crew members in SMS implementation
- Understanding the system of internal and external verification
- Crew’s behavior during ISM audits
- Common ISM related non-conformities
- Interactive exercises using Survey Simulator

Entry requirements
None

Duration
1 day

Who should attend
Shipping Companies: Deck Officers, engineers, ratings, technical superintendents
Course Objective
Proficiency in “managing” damages in case of an emergency, comprehension of certain methods for temporary and permanent repairs of classified vessels

Focus Points
Participants will learn about the following areas:

- Machinery surveys:
  - Class systematics
  - Scope and methods
  - Different survey arrangements

- Damages and Repairs to machinery components:
  - Engines
  - Shafting
  - Propellers – Survey Simulator practice
  - Boilers
  - ER fires - reasons and post-fire action – Survey Simulator practice
  - ER flooding – actions after drying

- Certification requirements to machinery components and spare parts

Content
Course participants will receive tips on structured damage analysis, applicable repair methods (temporary and permanent repairs) from a classification society’s point of view.

Entry requirements
None

Duration
2 days

Who should attend
Technical managers, fleet managers, superintendents, ship engineers, ship repair yards, technical staff
Course Objective
This course about newbuilding inspections offers the participants a lecture and individual practical exercises using a Survey Simulator Software.

Focus Points
- Familiarization with newbuilding process supervision
- Reading of hull drawings
- Fabrication of hull sections
- Final inspection of tanks/spaces
- Acceptance criteria
- Safety at work issues

Entry requirements  None
Duration  2 days
Who should attend  Designers, superintendents, owner NB inspectors, NB yard QC inspectors
Course Objective
Participants will learn about the most frequent Port State Control (PSC) deficiencies in a practical way. This will enable them to properly handle them and be well prepared for inspections, to reduce the risk of detention by PSC and to increase safety on board.

Focus Points
- Objectives and scope of PSC inspections
- PSC regimes and targeting methods
- Statistics of deficiencies being grounds for detention
- Inspections of equipment subject to top detainable deficiencies in different ships areas - interactive exercises using Survey Simulator

Entry requirements
Basic Maritime Knowledge

Duration
1 day

Who should attend
Shipping Companies: Ship officers, engineers, ratings, superintendents, ISM internal auditors, quality managers
Course Objective
The aim of the training is to provide participants with knowledge on how to optimize cooperation with a class society in order to be more efficient, reduce class direct and indirect costs, utilize time effectively, plan and manage your work using all the help available. Questions such as how to ensure quality of surveys which may affect safety and costs in ship’s operation, how to plan the works and achieve efficient fleet management will be answered. Tips and solutions for superintendents, ship owner’s representatives will be provided.

Focus Points
Our step by step guidance covers the following, presenting hints and tips focusing on efficient cooperation aimed at saving resources:

- Class and statutory background
- How to read, understand, use and comply with rules and regulations
- What are ship’s managers’ and class roles and obligations
- Which class notations and survey arrangements to choose
- What are similarities and differences between class societies
- How to schedule and plan surveys
- When to dry-dock a ship, how to survey and repair ship afloat
- How to complete hull surveys in the most efficient way
- How to avoid a situation of having a ship being targeted by PSC, Flag and class
- How to prepare for and comply with retroactive requirements
- How to deal with damages
- When and how to use laid-up operational status
- How to communicate with class and use class software systems and database
- How to reduce class surveys costs
- How to do smart survey booking
- How the electronic certificates work

Content
There will be a room for discussion of the cases participants face in daily ship management related to class.

Entry requirements
It is assumed that participants hold significant competence prior to course, and many issues must be seen as extension, clarifications, refreshing and updates.

Duration
3 days

Who should attend
Personnel involved in ship management, in particular ship owners’ superintendents
Course Objective
The purpose of this training is to
- help ship owners, ship managers, masters and officers in maintaining their ships in safe condition and in compliance with relevant IMO conventions and regulations
- improve quality of safety inspections carried out by officers and superintendents
- reduce risk of ships’ detentions by PSC, Flag and class inspectors

Focus Points
- Background of statutory regulations
- Scope of SOLAS, Load Line and MARPOL conventions – practice with Survey Simulator
- Statutory certification process
- Common deficiencies related to SOLAS, Load Line and MARPOL in different areas of bulk carrier, tanker and container ships – practical inspections with Survey Simulator
- Consequences of statutory deficiencies
- Handling of Conditions of Administration

Entry requirements
Basic knowledge about ships

Duration
3 days

Who should attend
Technical managers, fleet managers, technical and nautical superintendents, masters, deck officers and engineers, ISM internal auditors, vetting inspectors, Flag and PSC inspectors
Objective
The aim of the training is to upgrade and refresh superintendent’s knowledge.
After the course you will be able to explain:
- The interrelation between ship owners, class societies, insurers, flag authorities and last but not least port state authorities
- The role of class societies
- The practical implications of statutory regulations and important issues from rules & regulations to come
- A practical understanding of the hull strength, stresses, corrosion and fatigue
- Hull and machinery surveillance schemes
- Knowledge of the system of maritime regulations and implementation of legal requirements
- Management of non-conformities, practical performance

Focus Points
- Class concept and class systematics
- Class & statutory rules
- Machinery surveys (survey arrangements, damages)
- Hull strength, damages, inspection
- Inspection of underwater part of a ship in Survey Simulator
- Inspection of double bottom tank in Survey Simulator
- MARPOL/SOLAS/Load Line
- ISM/ISPS
- Port State Control

Entry requirements
It is assumed that participants hold significant competence prior to course, and many issues must be seen as clarifications, refreshing and updates.

Duration
3 days

Who should attend
Personnel involved in ship management, in particular ship owners’ superintendents
Course Objective
Upon completion of this course the participants will:

- Be familiar with the ISM Code
- Have a sound and practical background for audit performance, including auditing practices guidance, preparation, execution and follow-up
- Understand the audit as a management tool
- Be familiar with practical support documents
- Understand important functions of the SMS, such as improvement processes and dynamic elements, etc.

Entry requirements
None

Duration
2 days

Who should attend
Employees at ship owners and ship managers to become ISM internal auditors, internal auditors, managers within shipping and associated companies who are responsible for determining, measuring, and monitoring safety performance and any continuous improvement programs, individuals seeking interpretation of ISM Code requirements and knowledge of auditing principles
SurveySimulator provides realistic and cost-efficient 3D training software for survey inspections, using virtual reality technology and detailed models of actual ships and offshore structures.

**High reality 3D models**
- Four detailed 3D models of vessels are available for realistic survey simulations: Bulk carrier, tanker, container, MOU
- Each vessel consists of several survey areas - typical for specific ship types
- Real-time inspection areas available for virtual survey (cargo holds, tanks, etc.)
- Thousands of real-life deficiencies
- Accident-related safety at work scenarios

**Benefits of trainings with the SurveySimulator**
- Practical training of personnel without access to vessels
- Possibility of training ship crew onboard during voyages
- Objective evaluation of personnel expertise level
- Increased effectiveness of training
- Significant reduction of training costs
- Positive impact on incident-free operation

**Training modes**
- Ship knowledge mode - covers maritime naming convention, parts naming and certificate requirements
- Areas of attention mode - highlight of areas where hull structural deficiencies are likely to occur
- Survey requirements mode - visualization of class and statutory survey requirements (based on DNV GL’s NPS)
- Findings mode - display of deficiencies and descriptions
BUILDING SHIPS
BUILDING SHIPS

DNV GL – Maritime Academy course catalogue Building ships
CLASS AND STATUTORY
Basics of Classification

Electric General - Principles and Rules

Introduction to Shipbuilding

Machinery Piping and Statutory Design

System General and Statutory - Concept and Rules
Course Objective
Upon completion of this course the participants will have a good understanding of the requirements of classification societies as relevant to their situation as suppliers to the maritime world.

Note:
This course will be tailored to the specific needs of your company and therefore is only available for inhouse training.

Please contact your local Maritime Academy to discuss your particular requirements as regards contents and duration.

Focus Points (as customized for engine makers)
- Principles of classification
- Cycle of classification
- Major maritime conventions (SOLAS, MARPOL)
- Approval process engines and components
- Surveys and certificates
- The class requirements for your specific component
- Fire prevention (if applicable)
- Automation, design principles

Entry requirements  None
Duration  1 day
Who should attend  Employees of industries supplying the maritime industry
Course Objective
Upon completion of this course the participants will understand what are rules and regulations, electrical systems in principle, alarm & control system and instrumentation in principle, etc.

Focus Points
- Basic concept of electric systems
- Electrical equipment and the function
- General principles and requirements
- Instrumentation and control systems
- Emergency source

Entry requirements None
Duration 2 days
Who should attend All engineers working in shipping/shipbuilding (design, production, QC & supervisors); new designers in basic design departments
Course Objective
Upon completion of this course, the participants will understand general information on ships & shipbuilding, class systematic, ship’s operation condition and critical points, ships’ general systems & function, hull structure & strength concept, and design basic concept.

Focus Points
- Shipbuilding, shipping & operation statistics
- Organization of maritime regime, rules & regulations, class roles, shipyard position
- Shipbuilding process & information
- Ships structure & basic design concept
- Ship’s typical damages in operation for each type of ships
- Bulk carriers/tankers/containers – structure and details
- Hierarchy of hull structure & strength
- Steel materials logic
- Navigation & other operational systems
- Information on hull production & inspection
- Certification of equipment & components

Entry requirements  None
Duration  3 days
Who should attend  All engineers newly employed working in shipping/shipbuilding (design, production, QC & supervisors)
Course Objective
Upon completion of this course the participants will understand applicable class rules and international regulations, machinery & system design in general, oil pollution, drainage of compartment, handling of fuel oil, ventilation, etc.

Focus Points
- Design principles
- Ship piping system
- Machinery piping system
- Pipes, pumps, valves, flexible hoses and detachable pipe connections
- Ventilation system
- Fire-fighting system

Entry requirements
Attendance of a basic hull course or experienced engineers of more than 2 years

Duration
3 days

Who should attend
Engineers
Course Objective
Upon completion of this course the participants will understand role of class, purpose of rules, regulations and recommendations, ship’s function, basic concept of system, etc.

Focus Points
- Basic principles of accommodation design
- Basic principles of machinery arrangement, piping, ventilation and insulation
- Rules and regulations introduced by IMO, ILO and Class
- General review of machinery outfitting, hull outfitting, piping and accommodation outfitting
- Application of international conventions

Entry requirements  None
Duration            3 days
Who should attend  All engineers working in shipping/shipbuilding (design, production, QC & supervisors); new designers in basic design departments
Accommodation Design

Harmonized CSR

Hull Piping and Statutory Design

Hull Structure and Strength - Concept and Rules

Noise and Vibration
Course Objective
Upon completion of this course the participants will understand SOLAS 74 & ILO requirements, fire technical considerations, means of escape, details of construction, accommodation comfort, ventilation system, etc.

Focus Points
- Background of Rules for accommodation and the application
- Relevant regulations of SOLAS and ILO convention
- Arrangement of means of escape
- Ventilation system in accommodation
- Fire insulation/detection/alarm/fight system in accommodation
- General requirements for ship’s piping system
- Rules and convention for sanitary and fresh water system

Entry requirements
More than 2 years experience in accommodation design or have attended system general course

Duration
2 days

Who should attend
Experienced engineers
Course Objective
Upon completion of this course the participants will get an overview of harmonized CSR with reference to hull strength & design concept, technical rule background and differences between harmonized CSR and CSR Tank or CSR Bulk.

Focus Points
- General hull structure of tanker and bulker
- Design basis
- Load concepts and application of loads
- Hull girder strength
  - Hull girder yield strength, hull girder ultimate strength & hull girder residual strength
- Hull local scantlings
  - Prescriptive requirements
- Direct strength analysis
  - Hold structural strength analysis
  - Local fine mesh structural strength analysis
- Buckling
- Fatigue
- Material & welding
- Ship type specific requirements

Entry requirements  Please see below
Duration  3 days
Who should attend  Engineers who are familiar with basic hull concepts & design or experienced engineer for CSR Tank and CSR Bulk
Course Objective
Upon completion of this course the participants will understand ship cargo handling system, applicable class rules & international requirements, design principle of each system, classification of cargoes, etc.

Focus Points
- Cargo handling system and cargo vessels
- Applicable class rules and international requirements
- Design principles of ballast, bilge, air, sounding, deck fire-fighting, fire integrity, load line and ventilation system in cargo area
- Rule background and the application
- Relevant MARPOL, SOLAS, LL and BC code

Entry requirements
Attendance of a system general course or experienced engineers of more than 2 years

Duration
2 days

Who should attend
Engineers
HULL STRUCTURE AND STRENGTH - CONCEPT & RULES

Course Objective
Upon completion of this course the participants will understand general information on shipbuilding, class systematic, ship’s operation condition and critical points, hull structure and force flow, strength concept & design points, general hull rules and the background, etc.

Focus Points
Maritime regime
- Class systematic & its role
- The importance of ship’s operational aspects and critical points in designs
- Organisation of maritime regime and its effect on shipyard
- Overview & background of various conventions

Hull strength basic
- Shipbuilding trend
- Ship’s operation and typical damages
- Hierarchy of hull structure & strength
- Strength criteria & requirements
- Hull steel materials logic

Practical design aspects
- Background of prescriptive rule requirement
- Welding and detail construction design
- Inspection & N.D.T.

Entry requirements  None
Duration  3 days
Who should attend All engineers working in shipping/shipbuilding (design, production, QC & supervisors); new designers in basic design departments
Course Objective
Upon completion of this course the participants will understand concept of noise & vibration, approach method, analysis steps, design against noise & vibration, etc.

Focus Points
- Concept of noise & vibration
- 1st step, 2nd step and 3rd step analysis
- Measurements and trouble shooting
- Design recommendations to reduce noise & vibration

Entry requirements
Basic knowledge in noise & vibration and in FEA
Duration
2 days
Who should attend
Engineers
OFFSHORE

Drillship Hull

Drillship System

Dynamic Positioning System

FLNG Hull

FLNG System

Integrated Software Dependent Systems (ISDS)
Course Objective
Upon completion of this course the participants will understand basic design concept of drillship’s hull, differences between standard ship design and drillship design and how to apply the DNV GL standards for hull design.

Focus Points
- Basic principles of drilling vessel design
  - Drilling semi-submersible
  - Drill ship’s
  - Self-elevating units
- Rules, regulations, classification of drillship
- Hull girder capacity (yield, buckling)
- Fatigue assessment
- Structural design for structural categories (special/primary/secondary)
- Hull interface (moonpool area, substructure)

Entry requirements  None
Duration  2 days
Who should attend  All engineers working in offshore/drillship segment (design, production, QC & supervisors)
**Course Objective**
Upon completion of this course the participants will understand the basic principles of modern drillship technology, special features of drilling units and an overview of production systems, drilling systems, layout and rules & regulations etc.

**Focus Points**
- The basic principles of modern drilling system technology
- Rules, regulations and classification of drillship
- Special features of a drillship
- Drilling systems
- Safety related aspects
- System interfaces
- Risk analysis

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**Entry requirements**
None

**Duration**
2 days

**Who should attend**
All engineers working in offshore/drillship segment (design, production, QC & supervisors)
Course Objective
Upon completion of this course the participants will understand the design features, class rules related to DP system, operational challenges and survey / inspection requirements.

Focus Points
- DP system in general
- Design features - interpretation of class rules
- ERN and FMEA – concepts and appreciation
- DP – functionality, redundancy and failure response testing
- Survey requirements in terms of class rules

Entry requirements
Experience of general ship systems and the fields of instrumentation, automation and electrical engineering

Duration
3 days

Who should attend
Engineers
Course Objective
Upon completion of this course the participants will understand applicable Rules & regulations, electrical system in principle, alarm & control system instrumentation in principle, etc.

Focus Points
- General requirements, class & statutory
- Basic design concept and design philosophy of FLNG
  - General arrangement and layout
  - Material selection
  - Structural strength
  - Stability
- Rules, Regulations to be applied
- Scope of DNV GL Classification
- Use of risk assessment in FLNG design
  - Collisions
  - Sloshing
  - Stability and buoyancy hazards

Entry requirements
Engineers working in LNG FPSO & FSRU segment (design, production, QC & supervisors)

Duration
2 days

Who should attend
Engineers
Course Objective
Upon completion of this course the participants will understand basic design concept of FLNG’s safety, novel aspects and application in LNG transfer, conceptual system design.

Focus Points
- Use of risk Assessment in FLNG design
  - Collisions
  - Sloshing
  - Stability and buoyancy hazards
- Basic design concept and design philosophy of FLNG
  - Process descriptions and process flow diagrams
  - Operation/safety philosophy
  - Conceptual level design
  - Safety systems
  - Emergency shutdown
  - Electric systems
  - Mechanical systems
- Rules & regulations to be applied
- Use of risk assessment in FLNG design
  - Loss of well containment for LNG production installations
  - Gas release into confined space
  - Release of toxic on other hazardous substance
  - Loss of mooring, propulsion, station keeping

Entry requirements
Engineers working in LNG FPSO & FSRU segment (design, production, QC & supervisors)

Duration
2 days

Who should attend
Engineers
Course Objective
Upon completion of this course the participants will understand the concepts and requirements of DNV GL OS D-203, Integrated Software Dependent Systems.

Focus Points
- Motivation for ISDS
- What is software?
- ISDS structure and organization
- Relationship to other rules/standards
- Requirements for project roles
- Application to different software types
- Process assessments and audits
- Evidence of compliance
- ISDS project timeline
Course Objective
Upon completion of this course the participants will understand general information on LNG value chain and LNG liquefaction system including feed treatment system, various liquefaction cycles and FLNG applications etc.

Focus Points
- LNG value chain overview
- LNG facts
- Feed pretreatment
  - Acid gas removal
  - Dehydration / mercury removal
- LNG liquefaction cycle
  - Cascade cycle
  - Mixed refrigerant cycle (single MR, C3MR, etc.)
  - N2 expander cycle
- Evaluation of liquefaction process for FLNG
- Cryogenic equipment for LNG liquefaction
  - Transfer system
  - Compressor / expander / heat exchanger

Entry requirements
- Engineers working in LNG projects, managers and marketing personnel who need to present and profile LNG capabilities

Duration
- 2 days

Who should attend
- Engineers and marketing personnel
Course Objective
Upon completion of this course the participants will understand the background of the NORSOK regime and how the standards are developed and maintained.

Focus Points
- Applicable rules & regulations, type of cargoes
- Introduction of S-001, S-002, S-003, S-005, S-006, S-011, S-012
- S-002 Working environment
- S-012 Health, Safety and Environment (HSE) in construction – related activities
- Rules and regulations – PSA regulations

Entry requirements
Engineers working in offshore plant project

Duration
2 days

Who should attend
Engineers
Course Objective
To enhance knowledge and understanding of DNV GL’s Standards for certification 2.7-1 and 2.7-3 and to raise awareness about other standards and regulations related to offshore transportation.

Focus Points
- Background to DNV GL 2.7-1 Offshore Containers
- Relationship with other standards/regulations
- Changes in the 2013 edition of DNV GL 2.7-1
- Prototype testing
- Lifting sets
- Production and production survey
- Welding procedure qualification
- Periodic Surveys
- Challenges of certification of existing units
- Introduction to DNV GL 2.7-3
- Transport of dangerous goods in offshore containers

Content
The world’s growing demand for oil and gas requires safe and reliable offshore transportation events. As a result, DNV GL developed standards for certification 2.7-1 “Offshore Containers” and, more recently, 2.7-3 “Portable Offshore Units” to address the unique conditions experienced in these events and the need for reliable supporting equipment (containers, baskets, skips, skids, etc.).

DNV GL certified its 150,000th offshore container in accordance with 2.7-1 in 2013. Standard 2.7-3 for Portable Offshore Units is becoming equally as recognized in the industry.

This course will provide detailed information relating to offshore transportation as per 2.7-1 and 2.7-3, including requirements related to design, manufacturing, testing, marking, certification procedures and periodic inspection.

Entry requirements None
Duration 2 days
Who should attend Manufacturers, designers, owners / operators involved in offshore transportation events
Course Objective
Upon completion of this course the participants will understand structure design of FPSO units from the initial design phase to the detail design phase, etc.

Focus Points
- FPSO Hull design
- DNV GL offshore standard and recommended practices for offshore ships
- Direct analysis of wave bending moments and shear forces
- FPSO design by DNV GL Software
- Preliminary section scantlings
- Design of FPSO specific details

Entry requirements
Basic knowledge of structural design of ship and/or offshore structures

Duration
2 days

Who should attend
Structural engineers/naval architects
Course Objective
Following major changes to the content and scope of DNV GL Standard for Certification 2.7-2, this course is intended to give an overview of the Standard’s purpose and the technical requirements.

Focus Points
- Purpose and content of the standard
- Certification process
- Technical content and consequences during design
- Required documentation for completion of certification survey
- How to handle design variants, repairs and modifications

Content
DNV GL Standard for Certification 2.7-2 provides a summary of multiple international and DNV GL standards and how they apply to temporary/transportable offshore equipment. The course is intended to give the delegates an understanding of the new requirements, an overview of the foundations of the standard and its practical application to temporary equipment.

Entry requirements
None

Duration
1 day

Who should attend
Engineers involved in the design, survey or maintenance of temporary /transportable offshore equipment
**Course Objective**
Upon completion of this course the participants will understand general information on subsea production system including drilling, well head, XT, umbilicals, ROV, production control system, subsea processing and an overview of rules and standards, etc.

**Focus Points**
- Standards and rules of subsea production system
- Drilling, Well Head, XT concepts
- Workover system
- Tie-In and umbilicals
- ROV intervention system and tooling
- Template and manifold
- Production control system
- Valves
- FAT PVT SIT testing
- Anodes corrosion
- Subsea processing

**Entry requirements**  None
**Duration**  3 days
**Who should attend**  Project manager, discipline lead engineers, production manager, commissioning manager shall benefit from this course
PRODUCTION
Developing a Welding Procedure Specification (WPS)

Material Technology
**Course Objective**
Participants will be able to develop a Welding Procedure Specification correctly and be prepared for the subsequent welding procedure qualification test.

**Focus Points**
- Welding Processes including numbering system according to ISO 4063
- Grouping system for materials according to ISO/TR 15608
- Welding positions according to ISO 6947
- Weld preparation according to ISO 9692
- Hydrogen-induced cracking of steel welded joints
- Choosing the correct welding consumable
- Determination of preheating and interpass temperature
- Heat input calculation
- Non-destructive and mechanical tests
- Drafting a WPS according to ISO 15609
- Qualifying a WPS according to ISO 15614

**Content**
International standards as well as shipbuilding rules, for e.g. steel structures, pressure vessels, pipes and pressure equipment, require qualified welding procedure specifications (WPS) in advance of the production of such welded structures.

The main focus of this course is how to prepare a WPS and it is aimed at all supervisory staff involved in welding.

Preparing a WPS is not as complicated as it seems. The course will demonstrate how welding coordinators can easily and effectively fulfil the requirements of international standards and shipbuilding rules.

After a theoretical introduction of each standard the course participants will make practical use of them during the course. They will make their own preheating calculations based on “real life” examples. Welding consumables for specific welding jobs will be chosen from manufacturer’s handbooks. Participants will develop their own WPS which they can discuss with the trainer and learn about the subsequent mechanical and non-destructive tests.

**Entry requirements**
Basic welding knowledge (Welding Processes, Welding Consumables, Preheating, Weld Preparation)

**Duration**
2 days

**Who should attend**
Yard: Design engineers (naval architects), production manager, engineers, quality manager; Supplier (M&C): Engineers, quality manager; Industry and Service Provider: Quality manager, foremen, welding supervisors, welding coordinators, experienced welders
Course Objective
Upon completion of this course the participants will understand materials, application to ships, requirements, etc.

Focus Points
- Basic requirements to construction materials
- Basic facts about metallic materials
- Phase diagrams
- Steels, carbon manganese, aluminum, stainless steels and others

Entry requirements
More than two years experience in hull/outfitting design

Duration
3 days

Who should attend
Engineers in hull/outfitting department
SHIP TYPES
Container Carriers – Hull Design

Cruise Ship Essentials Training for Shipyards

LNG – Hull

LNG – System

LPG – Hull

LPG – System
Course Objective
Upon completion of this course the participants will understand container carrier operation, container carrier strength & design, container carrier rules background, container securing & outfitting and critical areas in design, etc.

Focus Points
- General hull structure of container carriers
- Container carrier statistic and market & design trend
- Class Rules and application
- Guidance for strength analysis
- Tensional strength analysis method
- Operational aspects and design concept
- Container ship evolution & current design trend
- Container securing
- Interaction between hull structure & outfitting
- Critical areas for hull structure
- Typical hull damages

Entry requirements
Attendance of a basic hull course or experienced engineers of more than 2 years

Duration
2 days

Who should attend
Engineers
**Course Objective**
The objective of this training is to increase both technical and operational knowledge about cruise ships for those working in shipyards. The course is usually conducted as an in-house training and can be tailored for a shipyard working on a specific project, where own documents can be utilized for some of the learning activities.

**Focus Points**
- The cruise ship market, main players, sub-segments and cultures
- Specific features/areas on the general arrangement of a cruise ship
- Regulatory framework and the role of class
- Technical focus areas for selected systems including fire safety, escape and lifesaving appliances
- Relevant passenger ship regulations from SOLAS
- Introduction to passenger ship requirements for hull, stability, noise and vibration
- Work processes for Polar Code, Safe Return to Port (SRtP) and Alternative Design

**Content**
This two-day training is highly interactive with an extensive use of real cases where possible, ideally supplied by the shipyard/course participants themselves. It targets design and proposal engineers, as well as technical staff and project managers who have experience with ship types other than cruise vessels. The course provides guidelines on problem solving throughout all project phases, from design and proposal, to engineering, project management, construction and finally outfitting and commissioning.

Upon completion, the participants will have a better global insight into the technical challenges, customer requirements and regulatory framework that govern the construction of a cruise ship. With their deeper understanding of these issues they will be able to contribute fully to problem solving and project management during design, construction and commissioning, and be better equipped to formulate in-depth questions when working with the various discipline experts.

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<thead>
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<th><strong>Entry requirements</strong></th>
<th>Some prior knowledge of ship design principles is recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration</strong></td>
<td>2 days</td>
</tr>
<tr>
<td><strong>Who should attend</strong></td>
<td>Design and proposal engineers at shipyards, as well as other technical staff and project managers working on newbuilding projects for cruise vessels</td>
</tr>
</tbody>
</table>
Course Objective
Upon completion of this course the participants will obtain improved understanding of LNG carriers, strength of hull structures, rules and regulations, material selection for lower temperature cargoes, etc.

Focus Points
- Rules and regulations
- Strength analysis
- Temperature analysis and materials

Entry requirements  Basic knowledge in hull design and gas carriers
Duration  2 days
Who should attend  Engineers
Course Objective
Upon completion of this course the participants will understand LNG carriers, cargo containment system, rules and regulations, etc.

Focus Points
- Rules and regulations
- LNG cargo handling, systems & operation
- Cargo piping
- Cargo tank safety relief valves
- Fire protection
- Personnel protection equipment
- Electric installations in cargo area
- Instrumentation & cargo equipment

Entry requirements
- Basic knowledge in system design and gas carriers

Duration
- 2 days

Who should attend
- Engineers
Course Objective
Upon completion of this course the participants will obtain improved understanding of LPG carriers, strength of hull structures, rules and regulations, material selection for higher and lower temperature cargoes, etc.

Focus Points
- LNG value chain overview
- Basic properties of gas carriers
- LPG carriers – tank type A and type C
- Rules and regulations
- Design loads
- Material selection for lower temperature cargoes
- Strength of hull structure and cargo tanks
- Critical details

Entry requirements  Basic knowledge in hull design and gas carriers
Duration  2 days
Who should attend  Experienced engineers
Course Objective
Upon completion of this course the participants will understand LPG carriers, cargo containment system, rules and regulations, etc.

Focus Points
- Applicable rules & regulations, type of cargoes
- Damage stability & cargo tank location
- Ship arrangement
- Cargo containment
- Cargo handling systems I & II
- Design of pressure vessel type cargo tanks
- Design of prismatic type cargo tanks

Entry requirements
Basic knowledge in system design and gas carriers

Duration
2 days

Who should attend
Experienced engineers
“All aspects were good. DNV GL is contributing well to the industry by conducting such courses.”

Internal Auditor ISM-ISPS-MLC for Shipping Companies,
18–19 December 2017, Pasay City, Philippines
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