

Appendix I

Maritime Sector Trainings

Subject	Alternative Fuels (AF) in shipping (LNG, Ammonia, Ethanol, Methanol, etc)
Main topics	<ul style="list-style-type: none">• Identify the various types of alternative fuels• Explain the use of AF on board• Describe safety issues related to the use of AF on board• Summarise how to inspect vessels using AF

Subject	Alternative Technologies (AT) in Shipping (Fuel Cells, Batteries, Wind Power, etc)
Main topics	<ul style="list-style-type: none">• Identify the various types of ATs• Explain the use of AT on board• Describe safety issues related to the use of AT on board• Summarise how to inspect vessels using AT

Subject	Maritime Autonomous Surface Ships (MASS)
Main topics	<ul style="list-style-type: none">• Identify the scope and types of MASS• Explain the safety aspects in relation to the use of MASS• Describe the regulatory framework for MASS• Summarise how to inspect MASS ship on board systems

Subject	Maritime Autonomous Surface Ships development (digitalisation and automation).
Main topics	<ul style="list-style-type: none">• Overview of the technological developments enabling ship automation: Robotic, Big data, Machine learning;• Practical examples of digitalisation/automation in ship operation (navigation, propulsion, safety...);• Different levels of automation and their practical application;• Digitalisation and automation regulatory impact;• Impact on cyber security;• Automation ship technology and business model;• Impact on the human element.

Subject	Maritime Search and Rescue (SAR)
Main topics	<ul style="list-style-type: none">• Describe the guidelines set in the IAMSAR Manual Vol. III (OSC)• Illustrate the duties and responsibilities as an OSC and be able to lead as OSC within typical SAR-missions• organize and lead constructive debriefing discussions• indicate teamwork skills needed as a team leader or participant during SAR operations

Subject	How to assess/audit an external contingency plan under the offshore safety directive
Main topics	<ul style="list-style-type: none">• Course based on the requirements of Directive 2013/30 on the safety of offshore oil and gas installations as well offshore oil and gas industry best practices (joint IPECA/OGP)• reviewing risks and how the plan shall address them.

Subject	Technical ship management
Main topics	<ul style="list-style-type: none"> • Give an overview of how a ship is managed (contract between an owner and the technical manager) • what are the responsibilities of the technical manager and how the technical manager fulfils the mandatory requirements (for example ensuring the monitoring of emissions on board etc). • How the role of the technical manager differs (or not) from others, for instance the ISM company.

Subject	Maritime Surveillance with Aircrafts
Main topics	<ul style="list-style-type: none"> • How aerial surveillance assets (both manned and unmanned) can be used to support a wide range of functions at sea. • describe briefly the applicable legislation and focus on the definition of concept of operations (ConOps) for different types of aerial surveillance activities in support to Coast Guard tasks, with an emphasis on the operational perspective, and exploring practical examples.

Subject	Hazardous Material Carriage Course
Main topics	<ul style="list-style-type: none"> • To provide an understanding of the International Maritime Dangerous Goods (IMDG) Code as applicable to the carriage of dangerous goods on Vessels, and their practical application on board; • Other relevant IMO Codes (IBC, ICG, IMSBC) for transport of dangerous and polluting goods and MARPOL Annex I (oils); • Characteristics and hazards of dangerous goods, and regulations governing their transport; • Classification of dangerous goods; Proper shipping name and UN number; • Packing, marking, labelling and placarding of dangerous goods and marine pollutants; • Shipping papers, dangerous goods manifest and other documentation; • Stowage and segregation on board; • Transport of dangerous goods in Containers; • Emergency Response Procedure (EmS Guide); • Medical First Aid Guide (MFAG); • Exercises on the use of IMDG Code.

Subject	Training on IMO Search And Rescue Convention, 1979 and amendments
Main topics	<ul style="list-style-type: none"> • Structure of the Convention; • Obligation on the Contracting Parties; • Cooperation; • Operating procedures.

Subject	Familiarization with : Basic training as per Chapter VI of STCW; Bridge Resource Management; Engine Room Resource Management
Main topics	<ul style="list-style-type: none"> • Practical familiarisation with the above topics • familiarization with equipment used, the way it is used, exercises, etc.

Subject	Global Maritime Distress and Safety System (GMDSS)
Main topics	<ul style="list-style-type: none"> • Communications at sea. • GMDSS Sea Areas. • Equipment and systems onboard and ashore.

	<ul style="list-style-type: none"> • Coastal state responsibilities. • Type of alerts. Navigational warnings. NAVAREAS. • Link with SAR operations.
--	--

Subject	Certificate in subterfuge in shipping
Main topics	<ul style="list-style-type: none"> • trade overview • main shipping routes • ship finance and chartering • regulatory framework • deceptive shipping practices • the dark fleet, current sanctions (Venezuela, Iran, Russia, etc.) • flag registries, intelligence (open intelligence resources, IHS, LLI, etc.). • Understanding vessel ownership management and the registration of a ship

Subject	Introduction to SOLAS and MARPOL
Main topics	<ul style="list-style-type: none"> • Origins and evolution. • Explanation of the different chapters (SOLAS) and annexes (MARPOL) with case studies to assist understanding.

Subject	Understanding Maritime Publications, Nautical Charts and Aids to Navigation
Main topics	<ul style="list-style-type: none"> • Introduction to main publications, charts and aid to navigation • Explanation of elements included (e.g. Traffic Separation Schemes, Buoys, Anchorages, subsea infrastructure, etc.) • Introduction to publication and updating procedure • Introduction to ECDIS

Subject	Understanding the Automatic Identification system
Main topics	<ul style="list-style-type: none"> • Origins and evolution. • Applicable legislation, recommendations and guidelines. • Explanation of AIS hardware, including transmitters and how they are configured (e.g. manual input vs. automatic input) and receivers. • Explanation of limitations (range, saturation). • The VHF Data Exchange System (VDES).

Subject	Understanding the maritime trade in petroleum
Main topics	<ul style="list-style-type: none"> • Types of exports and imports. • Overview of trade routes. • Models and motivation for ship-to-ship operations and understanding tanker operations

Subject	VTS training
Main topics	<ul style="list-style-type: none"> • standard VTS Operator Training

	<ul style="list-style-type: none"> • a visit to VTS
--	--

Subject	Risk Management Training in the maritime field
Main topics	<ul style="list-style-type: none"> • concepts and obligations of risk management

Subject	Ship Stability
Main topics	<ul style="list-style-type: none"> • Introduction to Stability. • Intact Stability at IMO level. Specifics on passenger ships. • Damage Stability at IMO level. Specifics on passenger ships. • Specifics on ro-ro passenger ships damage stability at EU level. • Stability documentation/Instruments on board.

Subject	High Speed Craft
Main topics	<ul style="list-style-type: none"> • Overview of the regulatory regime for HSC both for international and Domestic • Critical safety factors and overview of safety record of HSC • Specific HSC survey items for the initial and periodical survey with respect to conventional ships • Implementation and verification of the operational controls required by the Code, role of the Flag, RO and ship management

Subject	Vessel Automation
Main topics	<ul style="list-style-type: none"> • Introduction to artificial intelligence in the shipping industry • Use of machine learning and vessel automation in the maritime industry • Autonomous navigation principles and applications • Digital Twinning in Shipping

Appendix II

Quality and Environmental Management Systems

Subject	Certified ISO 9001:2015 Auditor/ Lead Auditor Training Course
Main topics	<ul style="list-style-type: none">• Audit as per the requirements of ISO 9001:2015 standard;• Understand key elements of ISO 19011 and ISO/IEC 17021 Standards;• Understand key quality issues;• Plan an audit against a set of audit criteria;• Successfully execute a quality management systems audit;• Create clear, concise and relevant audit reports;• Communicate the audit findings to a client;• Practical exercises based upon a fictional company.

Subject	Certified ISO 9001:2015 Auditor/ Lead Auditor - Refreshing Course
Main topics	<ul style="list-style-type: none">• Audit as per the requirements of ISO 9001:2015 standard;• Understand key elements of ISO 19011 and ISO/IEC 17021 Standards;• Understand key quality issues;• Plan an audit against a set of audit criteria;• Successfully execute a quality management systems audit;• Create clear, concise and relevant audit reports;• Communicate the audit findings to a client;• Practical exercises based upon a fictional company.

Subject	ISO 9001:2015 Internal Auditor Course
Main topics	<ul style="list-style-type: none">• Understanding and effectively auditing the intent of ISO 9001;• Understanding the organisation and its context;• Understanding the needs and expectations of interested parties;• Design and development controls;• Leadership and commitment for the quality management system;• Understanding risks and opportunities;• Determination of requirements for products and services;• Control of externally provided products and services;• Performance evaluation;• Identification and reporting of non-conformances in the process audit;• Evaluating corrective actions for root cause and effectiveness; • Auditing techniques including effective auditing of management.

Subject	ISO 27001:2022 Information Security Management System (ISMS)
Main topics	<ul style="list-style-type: none"> • Identify a typical framework for implementing ISO/IEC 27001 following the PDCA cycle; • Conduct a base line review of the organisations current position with regard to ISO/IEC 27001; • Interpret the requirements of ISO/IEC 27001 from an implementation perspective in the context of their organisation; • Implement key elements of ISO/IEC 27001.

Subject	ISO 31000:2018 Risk Management Implementation
Main topics	<ul style="list-style-type: none"> • Become familiar with the key elements of ISO 31000:2018 as the basis for good risk management practice; • Understand how ISO 31000:2018 can be applied to a variety of organisations and sectors. • Compare how this new version of the standard can introduce changes, including improvements, to an organisation's Risk Policy; • Introduction, Risk Management Framework according to ISO 31000:2018; • Concepts and definitions related to risk management; • Risk management standards, frameworks and methodologies • Implementation of a risk management framework; • Understanding and analysing an organisation and its context; • Risk identification and assessment, risk evaluation, treatment, acceptance, communication and surveillance according to ISO 31000:2018; • Risk identification; • Risk analysis and risk evaluation; • Compare what are the main issues that might need to be addressed in an organisation's risk management practices; • Risk treatment; • Risk acceptance and residual risk management; • Risk communication and consultation; • Risk monitoring and review; • Conclusions on what organisations can do or should do in order to improve its risk management practices aligned with ISO 31000:2018.

Subject	ISO 31000:2018 Risk Management Awareness
----------------	---

Main topics	<ul style="list-style-type: none"> • Understand the principles, framework and process described in ISO 31000:2018 • Create and protect value in your organisation by managing risks, making decisions, setting and achieving objectives and improving performance • Assist your organisation in setting strategy, achieving objectives and making informed decisions. • Understand governance and leadership role in managing risk at all levels
--------------------	--

Subject	ISO 14064:2018 - GHG accounting and verification
Main topics	<ul style="list-style-type: none"> • Understand the principles, framework and processes described in ISO 14064:2018 • Part 1 - principles and requirements at the organisation level for quantification and reporting of GHG emissions and removals. • Part 2 - GHG project types, offset carbon credits and innovative technology projects. The principles, requirements, and guidance for quantification, monitoring and reporting of activities intended to cause GHG emission reductions or removal enhancements. • Part 3 -principles and requirements for managing the validation and/or verification of GHG assertions. • monitoring and reporting CO2 calculations methods • Emissions trading compensation schemes

Subject	ISO 45001:2018 - requirements for an occupational health and safety (OH&S) management system
Main topics	<ul style="list-style-type: none"> • Understand the principles, framework and processes described in ISO 45001:2018 • Create and protect value by managing health and safety risks, making decisions, setting and achieving objectives and improving performance. • Assist your organisation in setting Health & Safety strategy, achieving objectives and making informed decisions. • Understand governance and leadership role in managing health and safety issues at all levels

Subject	ISO 14001:2015 / EMAS - Environmental protection representative
Main topics	<ul style="list-style-type: none"> • knowledge and overview of local environmental laws and regulations. • duties and responsibilities of organizations under operational environmental protection systems

- | | |
|--|---|
| | <ul style="list-style-type: none">• identification, interpretation and application of relevant regulations, records and evidence requirements |
|--|---|