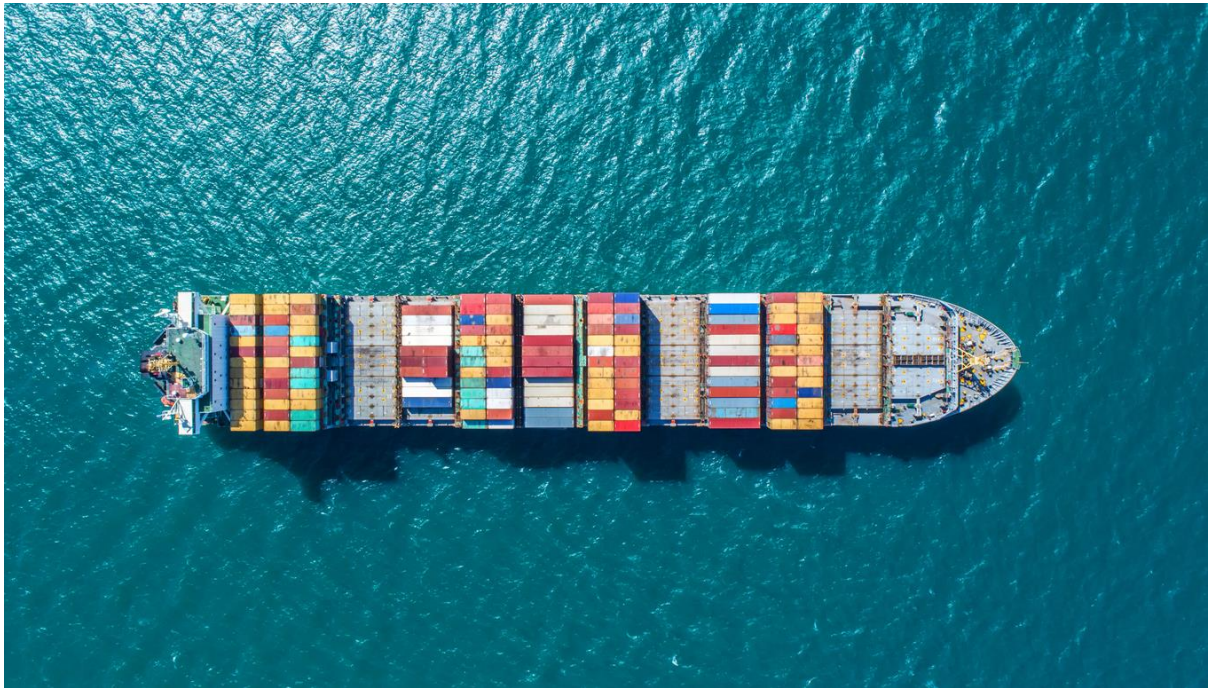


An Introduction to Energy Efficient Ship Operation - SYLLABUS -



Background

The Global Industry Alliance to Support Low Carbon Shipping (Low Carbon GIA) is a public-private partnership, established under the framework of the IMO-Norway GreenVoyage2050 Project, that brings together maritime industry leaders with a view to supporting an energy efficient and low carbon maritime transport system. Leading shipowners and operators, classification societies, engine and technology manufacturers and suppliers, big data providers, oil companies and ports have joined hands under the Low Carbon GIA to collectively identify and develop innovative solutions to address common barriers to the uptake and implementation of energy efficiency technologies, operational best practices and alternative low- and zero-carbon fuels.

As part of this collaboration, the Low Carbon GIA have developed this free E-learning course on energy efficient ship operation, to help raise awareness of issue and support those in the maritime sector understand how they could contribute to reducing GHG emissions from ships.

This course is an introductory course, intended as a first glimpse into how GHG emissions from ships can be addressed. Additional course modules, covering detailed practical measures that can be taken by the engine department and deck department are currently under development and will be released in due course.

Target Audience

Since this course is intended to be a general introduction to the topic, the intended audience is broad and no particular background experience is required.

This course will be of particular interest to:

- Someone curious and interested to learn more about the international regulatory framework to address emissions from ships.
- Seafarers working on board ships, interested in practical measures to reduce fuel consumption.
- Individuals working in the maritime sector, interested in environmental protection and climate change.

Learning Objectives

This course will cover the regulatory framework of the International Maritime Organization (IMO) to address greenhouse gas (GHG) emissions from ships and explain various measures which can improve the energy efficiency of ships, and thereby reduce GHG emissions and contribute to the mitigation of climate change.

At the end of the course, you will be able to:

- Describe shipping's contribution to the global GHG emissions
- Discuss the role of the International Maritime Organization in developing international regulations for the shipping sector
- Outline the energy efficiency measures the IMO has adopted to address emissions from ships
- Discuss several ways in which a ship's fuel consumption can be reduced
- Explain how implementation of energy saving measures leads to reduced GHG emissions
- Discuss how different maritime stakeholders can play a role in reducing GHG emissions

Methodology

This self-paced course is broken down into two modules:

1. Greenhouse gases and energy efficiency in the maritime industry
2. Practical ways of reducing energy use at sea

Each of the modules are self-standing, and so can be accessed in any order. However, it is recommended that the modules be completed sequentially, particularly for learners who are completely new to the topic as some of the ideas from the second module build upon concepts taught in the first module.

Each module features a mix of learning tools which deliver key content and engage the learners. These include short activities, case studies, quizzes and interactive knowledge checks throughout the course.

Completion and certification

For each of the modules, there is a quiz summative assessment of 10 multiple choice questions, which is separate from the course module content itself, but is aimed at consolidating knowledge and content from that particular course module.

A certificate of completion will be awarded to learners who complete both assessments with a score of 70% or higher.

Useful weblinks

For more information about the Low Carbon GIA, the IMO-Norway GreenVoyage2050 Project and its activities, visit <https://greenvoyage2050.imo.org>.

For more information on the regulatory framework of IMO to address GHG emissions from ships, visit the [IMO website](#).

Technical Requirements

Browser:

- The course works best with Firefox 3.6 or higher (download for free at <https://www.mozilla.org/en-GB/>)
- The course is also compatible with Google Chrome (download for free at <https://www.google.com/intl/en/chrome/>)
- For technical reasons, it is not recommended to use Internet Explorer.
- Note: JavaScript & Cookies must be enabled.

Software:

Adobe Acrobat Reader (download for free at <http://www.adobe.com/products/acrobat/readstep2.html>).

Adobe Flash Player (download for free at <https://get.adobe.com/flashplayer/>)

Microsoft Office (Windows or Apple version) or Open Office (download for free at <http://www.openoffice.org>)

Platform: Windows 95, 98, 2000, NT, ME, XP or superior; MacOS 9 or MacOS X Hardware: 64MB of RAM, 1 GB of free disk space

Modem: 56 K