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CERTIFIED GREEN SHIPPING MANAGEMENT: ADVANCED EMISSION CONTROL, SUSTAINABLE FUELS, AND ENERGY-EFFICIENT SHIP DESIGN

**Fully Accredited
By:**

Chartered Institute of
Professional Certifications

CPD
Certification Service

PROGRAM OVERVIEW



Global shipping faces increasingly stringent regulations to reduce carbon emissions. A recent report by the International Maritime Organization (IMO) revealed that **over 70% of shipping companies struggle with compliance challenges related to emission control technologies and alternative fuels**. Additionally, the IMO's 2020 sulfur cap regulation imposes strict requirements, and a 2023 industry survey showed that 65% of maritime operators find it difficult to meet the evolving decarbonization standards.

This certified program is designed to provide you with an in-depth and comprehensive understanding of green shipping management, focusing on emission control technologies, sustainable fuels, and energy efficiency in ship design. Participants will gain knowledge on a wide range of **critical topics, including the regulatory frameworks that drive decarbonization, engineering solutions for emissions reduction, and financial incentives like the Poseidon Principles** that promote green investments in shipping.

Throughout the program, participants will engage in the **technical aspects of emission control, mastering technologies such as onboard carbon capture (OCC) and air pollution abatement systems**. The course will also cover the integration of **alternative fuels like LNG, biofuels, ammonia, and hydrogen, exploring safety protocols and compliance standards**. Additionally, you will dive into energy-efficient ship design strategies, learning about hull optimization, propulsion systems, and retrofitting techniques to improve energy performance.

ACCREDITATIONS



4.8



4.6



PROGRAM OVERVIEW



Using real-world case studies, the program will also address **port and terminal decarbonization efforts, including Onshore Power Supply (OPS) systems** and emission capture technologies at berth. Participants will also explore the role of smart shipping technologies, such as just-in-time (JIT) arrivals and route optimization, to enhance operational efficiency. Furthermore, the course will emphasize Environmental, Social, and Governance (ESG) reporting best practices, equipping you with the tools to ensure transparency and sustainability in maritime operations.

Upon successful completion of the program, you will attain the **Certification in Green Shipping Management**. This prestigious certification will enhance your professional profile by showcasing your expertise in navigating the complex regulatory landscape of maritime decarbonization, sustainable shipping practices, and compliance with global environmental standards. The certification is industry-recognized and valid for life, demonstrating your commitment to driving sustainability and regulatory compliance within the shipping industry. We look forward to welcoming you to this program.

ACCREDITATIONS



4.8




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KEY SKILLS YOU WILL GAIN

From This Program



**IMO 2020 SULFUR CAP COMPLIANCE
POSEIDON PRINCIPLES INTEGRATION
SEA CARGO CHARTER APPLICATION
PARIS AGREEMENT DECARBONIZATION GOALS**

**GLOBAL EMISSION REDUCTION REGULATIONS
DECARBONIZATION INVESTMENT BUSINESS
CASES
ONBOARD CARBON CAPTURE (OCC) TECHNOLOGY**

**AIR POLLUTION ABATEMENT TECHNIQUES
JUST-IN-TIME (JIT) ARRIVALS
ROUTE OPTIMIZATION
ENGINEERING SOLUTIONS FOR EMISSION
REDUCTION**

**EMISSION CONTROL TECHNOLOGY RISK
MANAGEMENT
ALTERNATIVE FUEL INTEGRATION (LNG,
BIOFUELS, AMMONIA, HYDROGEN)
LIFE-CYCLE ANALYSIS FOR FUELS**

**IMO FUEL REGULATION COMPLIANCE
ENERGY-EFFICIENT SHIP HULL DESIGN**

YOUR FACULTY DIRECTOR



Filipe Santana

Leading Expert in Maritime Decarbonization and Offshore Energy Transition

Filipe is the **Head of Engineering, Environment, and Energy Transition** at the **Oil Companies International Marine Forum (OCIMF)**, a global association of leading energy companies dedicated to setting environmental standards for maritime transport, terminals, and offshore operations. He spearheads OCIMF's energy transition initiatives, focusing on decarbonization projects involving alternative fuels, shore power supply, emissions capture, and regulatory compliance with the **IMO, EU, and USA**. Filipe leads cross-functional teams across various regions, working on **vessel propulsion, cargo equipment design, offshore terminal structures, and environmental protection standards**. Notably, he was the first person from the southern hemisphere to join OCIMF.

Before his secondment to OCIMF by **Petrobras**, Filipe served as a technical leader for maritime and offshore terminals and ship-to-ship operations. He holds a **Data Science** degree from **MIT** and graduated as the top student in **Naval Architecture, Marine and Ocean Engineering** from **UFRJ**, where he earned a Master's in **Ocean Engineering** and won prestigious research awards.

Filipe also serves as **Director of Institutional Relations** for the **Latin-American Society of Marine Terminals Operators (SLOM)** and sits on the **External Advisory Board** of the **International Association of Classification Societies (IACS)**. His contributions have shaped international guidelines for maritime and offshore safety.

OUR PARTICIPANTS

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PROGRAM AGENDA



MODULE 1 - UNDERSTANDING DECARBONIZATION REGULATORY DRIVERS

- Paris agreement, IPCC report, and global decarbonization background
- IMO strategy and decarbonization levels of ambition
- IMO short-term and medium-term measures
- EU regulations
- USA regulations

MODULE 2 - UNDERSTANDING DECARBONIZATION FINANCIAL DRIVERS

- Building business cases for decarbonization investments
- The Sea Cargo Charter and its impact on chartering decisions
- The Poseidon Principles and financing maritime decarbonization
- FuelEU pooling as incentive

MODULE 3 - OVERVIEW OF ENGINEERING AND OPERATIONAL STRATEGIES FOR EMISSIONS REDUCTION

- Engineering solutions for emission reduction in shipping

- Operational strategies for emission reduction
- Risk management in implementing new technologies

MODULE 4 - SAFETY OF ALTERNATIVE FUELS

- Alternative fuels characteristics
- Health, Safety, and Environmental (HSE) management for LNG, biofuels, ammonia, methanol, and hydrogen
- Integration of alternative fuels into existing operations
- Case studies: Safe bunkering practices and operations

MODULE 5 - COMPLIANCE OF ALTERNATIVE FUELS

- IMO guidelines for life-cycle analysis of alternative fuels
- Certification processes for alternative fuels

MODULE 6 - ENERGY EFFICIENCY IN SHIP DESIGN

- Hull shape optimization for energy efficiency

PROGRAM AGENDA



- Propulsion system optimizations and associated energy efficiency indicators
- Energy Saving Devices (ESDs): Air lubrication and wind-assisted propulsion

MODULE 7 - ONBOARD EMISSIONS ABATEMENT TECHNOLOGIES

- Air pollution abatement
- Onboard carbon capture (OCC)

MODULE 8 - PORTS & TERMINALS DECARBONIZATION

- Onshore Power Supply (OPS) systems and their implementation
- Emission capture technologies at berth
- Case study: Decarbonization efforts at major ports (e.g. Port of Gothenburg)
- HSE management in port decarbonization

MODULE 9 - SMART SHIPPING TECHNOLOGIES AND OPERATIONAL MEASURES

- Just-in-time arrivals
- Sea passage, route, trim, and weather optimization
- Fleet allocation strategies

MODULE 10 - ESG REPORTING

- Introduction to Environmental, Social, and Governance (ESG) reporting in shipping
- Shipping ESG reporting best-practices

YOUR CHARTER DESIGNATION



Chartered Institute of Professional Certifications' programs are unique as they provide you with professional charter designations and marks that can be used across your lifetime once you have completed our programs.

Upon successfully attending this program, you will be awarded with the **Certification in Green Shipping Management** that can be used in your resume, CV and other professional credentials. This certification is industry-recognized with lifelong validity.

Globally recognized and highly sought after, this certification will elevate your professional credentials and showcase your expertise in navigating the complexities of green shipping management and emission control regulations. It will also validate your ability to implement a comprehensive sustainability framework, ensuring your organization's maritime operations align with the stringent global environmental standards and decarbonization goals. Developed by the **Chartered Institute of Professional Certifications**, this program's content has been independently accredited by the **CPD Certification Service**, adhering to the highest standards of continuing professional development principles.

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of Our Programs

Singapore and Asia Pacific Enquiries

Email: advisor@charteredcertifications.com
Phone: +65 6716 9980
Address: Chartered Institute of Professional Certifications
1 Gateway Drive
#20-04 Westgate Tower
Singapore 608531

Australia and New Zealand Enquiries

Email: advisor@charteredcertifications.com
Phone: +61 3 9909 7310
Address: Chartered Institute of Professional Certifications
530 Little Collins Street, Level 1
Melbourne VIC 3000, Australia

UK, Europe and Middle East Enquiries

Email: advisor@charteredcertifications.com
Phone: +44 (020) 335 57898
Address: Chartered Institute of Professional Certifications
86-90 Paul Street
London, EC2A 4NE

USA Enquiries

Email: advisor@charteredcertifications.com
Phone: +1 888 745 8875
Address: Chartered Institute of Professional Certifications
99 Wall Street #3936
New York, NY 10005