POSTGRADUATE DIPLOMA IN MARITIME SAFETY AND SECURITY

Enhancing the quality of shipping operations
As the President of the World Maritime University (WMU), I am pleased to introduce our Postgraduate Diploma in Maritime Safety and Security that is delivered in partnership with DNV GL. Shipping is a sector with global impact, characterised by continuous introduction of new supporting technologies and a very tight regulatory framework that is subject to ongoing review and improvement. Ensuring safety and security at all times is essential for shipping and for maintaining the good reputation for any organization, institution or company concerned with activities at sea. It is also good for business as there is a significant spill over – financial, economic, social and environmental impact in the event of safety or security failures.

Being a seafarer on-board the numerous sea-going vessels irrespective of type or simply based ashore does not make any difference. It is a prerequisite for a successful career that we all keep abreast of developments, including technology, as well as with the ever increasing demands on our time and at work. We also have to adapt to the continuous changes and ongoing technical, regulatory, commercial and environmental developments and challenges as well as opportunities.

This Postgraduate Diploma is one of the avenues being used by WMU to build global capacity to support and promote important issues and especially the United Nations’ Sustainable Development Goals and in particular Goal 4: Ensure inclusive and quality education for all and promote lifelong learning; and Goal 14: Conserve and sustainably use the oceans, seas and marine resources.

The postgraduate Diploma in Maritime Safety and Security (MSS) covers topics of critical importance for the people involved in or responsible for the quality, safety and security of shipping operations as well as their environmental impact. The programme addresses areas of critical importance for the maritime industry with a blended learning approach to operational, technical and commercial issues and covers topics such as maritime transport and shipping operations; safety and environmental protection issues; requirements and implementation of maritime safety; legal and operational aspects of maritime security; leadership and best practices in port management.

I enthusiastically invite you to join this programme. It is my hope that you will find this Postgraduate Diploma relevant and responsive to your needs as well as that of the broader maritime and ocean constituents. At WMU, we have a very strong commitment to the highest level of academic and professional standards.

Dr Cleopatra Doumbia-Henry
President, World Maritime University

International regulations governing operations at sea and in ports have become increasingly complex, leaving seafarers to navigate through a demanding array of rules and standards. Training seafarers to understand how to achieve compliance with regulations and what it takes to go beyond basic requirements to stand out as a leader in maritime safety has become a key to success in today’s maritime environment.

To offer the industry a holistic programme that covers the most pressing safety issues in shipping, DNV GL has worked very closely with the World Maritime University (WMU) to develop the new Postgraduate Diploma in Maritime Safety and Security. This collaboration was a natural fit for us, and we are confident that the course combines the best of both organizations – the WMU’s high academic standards and DNV GL’s longstanding technical expertise. At the same time, it supports the maritime safety goals set by the IMO.

We invite you to take advantage of this comprehensive programme, whether you work at sea or at shore. Together with the World Maritime University we aim to offer an executive education for maritime professionals, providing them with the basis for overcoming any regulatory challenges their businesses may face and supporting companies in becoming role models for safe and reliable operations as well as further enhancing the overall level of safety in shipping.

Knut Ørbeck-Nilssen
CEO DNV GL – Maritime
INTRODUCTION

Thank you for your interest in our Postgraduate Diploma in Maritime Safety and Security. This topic is indeed one of the most essential elements for ensuring the smooth operation of ships both at sea and ashore.

Whether your background is a commercial or administrative one, this Postgraduate Diploma offers a thorough introduction to the underlying concepts related to the overlapping domains of maritime safety and security. The programme addresses current topics of critical importance in the maritime industry through a distance learning approach.

For any organization dealing with activities at sea, whether public or private, ensuring safety and security is an essential element for maintaining a solid reputation and retaining profitability. And at a personal level, if you are looking to boost your career and enhance your ability to address the continuous changes and ongoing technical, regulatory and commercial developments, it is necessary to keep up with the ever-increasing demands of the shipping industry.

For people involved in the everyday delivery and/or monitoring the quality of shipping operations, as well as the associated regulatory framework – either as crew member on-board vessels or based ashore – a deep understanding of the intricacies of the systems is vital. Innovative thinking can ensure the quality and uninterrupted function of shipping operations. To provide the necessary insight, the World Maritime University (WMU), founded by the International Maritime Organization (IMO), a specialized agency of the United Nations, and DNV GL, the world’s largest ship and offshore classification society have come together, building from their experience in offering the Postgraduate Diploma in Executive Maritime Management, to also offer this exceptional new programme. The partnership between WMU, offering academic and research expertise, and DNV GL, contributing experience of best practices in the industry, makes this programme truly unique.

We would like to invite you to take a closer look at what our programme can offer you.

We also look forward to answering any questions you may have and welcoming you to our Postgraduate Diploma in Maritime Safety and Security.

Programme Coordinators

Dr Dimitrios Dalaklis  
World Maritime University

Bernhard Loebermann  
Senior Training Advisor  
DNV GL - Maritime Academy
THE PROGRAMME

THE MODULES
1) Maritime Transport and Shipping Operations
2) Safety and Environmental Protection Issues
3) Maritime Safety: Requirements and Implementation
4) Legal and Operational Aspects of Maritime Security
5) Leadership and Best Practices in Port Management

TIME FRAME
The programme runs for eleven months, from September to July every year. A new module begins every eight weeks. Each module is completed with the submission of a written assignment before the next module begins.

ENTRY REQUIREMENTS
- A minimum of three (3) years’ experience as a result of working with administrative, regulatory, technical, commercial or scientific aspects of maritime operations
- Bachelor’s degree in a relevant discipline or a Master Mariner / Chief Engineer qualification
- English language ability (both written and spoken): TOEFL score 80+ or IELTS score of band 6.0+ or Cambridge Proficiency Examination (CPE) or another qualification (e.g., GCE O-level, WAEC, CXC) deemed equivalent by the Admission Board

TARGET GROUP
This programme is designed for both individuals in the private sector who manage and supervise tasks associated with the safe and secure conduct of shipping operations and for individuals in the government sector who focus on enforcement of regulations in the extended domains of maritime safety and security. Professionals who are involved in assessing associated deficiencies, including ways to alleviate them, will also benefit from the programme.

This programme is also ideal for individuals who are experienced in the field and are planning a move from on-board to on-shore positions. Furthermore, it is also beneficial for persons currently engaged in the supervision of operations. Company Security Officers or Designated Persons Ashore (DPA) are responsible for compliance with regulations and this programme provides deeper insight into the development of regulations, their interpretation and implementation in daily business operations.

PROGRAMME DELIVERY
In order to maximise flexibility, the programme is offered by distance learning. The e-learning platform includes videos, collaboration tools, and self-assessment exercises in preparation for the cumulative final assessment of each module. In addition, a discussion forum facilitates interaction between the students and with the instructors.

STUDY TIME
In total, you should expect to devote around 1,000 hours of your time to reading of material, personal learning, assignment preparation, discussion with peers, using collaboration tools, contacting instructors, etc. This works out to be about 200 hours per module.

This is a notable investment of time. Therefore, we recommend thoughtful planning when you begin your studies. It is best to progress steadily through the modules rather than to try and complete everything at the end of eight weeks.

Under extenuating circumstances, it is possible to request an extension by making an official written request to the programme coordinators.
STUDY MATERIAL
All study materials will be made available via an e-learning platform that includes videos, as well as lecture notes and other necessary materials. Self-assessment tools are also provided within the platform to help you prepare for the cumulative final assessment. Participants will also have access to the online WMU library materials.

Additional materials such as books, articles or other recommended texts not available through WMU’s e-library are not included in the module fees.

UNIVERSITY QUALIFICATION
Upon the successful completion of all requirements, you will be awarded a Postgraduate Diploma in Maritime Safety and Security issued by the World Maritime University.

PROGRAMME FEES
The total cost of the Postgraduate Diploma in Maritime Safety and Security is EUR 6,900 (EUR 1,380 per module).

The fees include the necessary videos (available online) as well as the lecture notes in pdf format. Participants must cover the costs of any special arrangements they request.

During the programme you will receive two invoices. The first will be sent upon registration at the start of the programme and will cover the first two modules. The second invoice will be sent before you start the third module and will cover the remaining modules.

A 10% discount per participant is offered for more than two participants from the same company.

EUROPEAN CREDIT TRANSFER SYSTEM (ECTS)
The Postgraduate Diploma carries a credit weighting expressed in European Credits (ECs). The complete programme consists of 40 ECs with each module consisting of 8 ECs. Under the European Credit Transfer System (ECTS), these credits may be transferred on to other programmes, at WMU or elsewhere, if they are approved by the receiving university.

Credits earned in your Postgraduate Diploma may be used in partial fulfilment of the requirements for another degree. At WMU, for example, you would be completely exempted from the first term of the standard Malmö-based Master of Science (M.Sc.) in Maritime Affairs programme, allowing you to complete it in just ten months.

THE CONCEPT OF DISTANCE LEARNING
The Maritime Safety and Security programme offers the latest in distance-learning technology that includes an advanced e-learning platform to which only registered students have access. Through the e-learning platform, participants will have access to video lectures from each expert, self-study material and access to WMU’s online library materials.

Collaboration tools enable direct contact with the instructors and other participants in order to facilitate discussions and address questions.

TERMS & CONDITIONS
The full Terms and Conditions are available on our website www.maritime-safetyandsecurity-diploma.com

HOW TO APPLY
You may apply through:
www.maritime-safetyandsecurity-diploma.com

Register online and upload all related files directly. For any questions please refer to the contact details under “Administration”.

PROGRAMME COORDINATORS
If you have specific questions about the programme, please contact:

WMU
Assistant Professor Dimitrios Dalakis, dd@wmu.se

DNV GL
Bernhard Loebermann, bernhard.loebermann@dnvgl.com

ADMINISTRATION
For general questions, registration for the programme or any other support, please contact:

■ Location 1 (Piraeus):
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■ General Questions and Support: MSS.pgd@dnvgl.com
■ Admissions Queries: pgdadmissions@wmu.se
■ Website: www.maritime-safetyandsecurity-diploma.com
THE MODULES

MARITIME TRANSPORT AND SHIPPING OPERATIONS

This module provides a comprehensive understanding of the contemporary maritime transport system, including the basics of the shipping market and the role and significance of different types of ports. It also provides fundamental knowledge in shipping operations and an overview of modern shipping management, including commercial and technical functions. During this module, a large number of contemporary concepts and principles that govern the maritime world will be discussed and evaluated. In addition, real-world scenarios will be examined in which a broad understanding of marine activities is needed to identify effective solutions to interdisciplinary problems.

Intended Learning Outcomes

By the end of this module, you should be able to:

- Identify the key elements of the global maritime transport system
- Discuss the different modes of transport and identify the mechanics behind the "maritime comparative advantage"
- Describe the evolution of ports/terminals and their equipment; recognize the nature and importance of ports to the national and/or regional economy
- Identify the key elements of shipping operations and understand the prevailing theories of shipping business
- Appreciate the economics of maritime safety and security
- Recognize the role of the government in policy formulation and the administration of maritime affairs
- Value the importance of implementation and enforcement of international regulations in the context of maritime safety, security and environmental pollution prevention

Course outline

- The global maritime transport system
- Stakeholders in the maritime industry
- Modes of maritime transport
- Documentation, financial transactions and business entities in maritime transportation
- Documents used to export and import cargo
- Business entities in commercial maritime transportation
- Generic organisational structure of shipping companies
- Ship & fleet management principles
- Commercial seaports
- Intermodalism & port operations
- The International Legal Framework for Maritime Transport (including Maritime Labour Convention, 2006)
- The IMO’s legislative framework
- General roles and obligations for IMO’s member States
- Implementation of conventions & codes
- Role of government in maritime matters
- The role of the classification societies
- Economic aspects of maritime safety and security
SAFETY AND ENVIRONMENTAL PROTECTION ISSUES

This module focuses on environmental aspects and related liabilities of shipping security. The module addresses standard operational impacts and accidents that place a burden on the environment, as well as related legal frameworks that impose increasingly strict constraints. The role of autonomous or drone technology on safety and security aspects of (future) shipping is also addressed.

Intended Learning Outcomes
By the end of this module, you should be able to:
- Understand the scope and complexity of the environment aspects in shipping
- Select suitable technical and operational measures to reduce the environmental impact of ships
- Comprehend the main MARPOL levers to reduce the environmental impact of global shipping
- Understand practical challenges in implementing global environmental safety measures for international shipping
- Participate in informed discussions on unmanned shipping

Course outline
- Shipping & environment
- Environmental awareness & market context
- Emissions to air
- Energy efficiency, management & MARPOL VI
- Energy efficiency options I (operation)
- Ballast water & biofouling management
- Ballast water management
- Antifouling
- Waste management, oil pollution & recycling
- Tanker safety - the dilemma
- Autonomous technology for safety and security

ASSIGNMENT
Each of the five modules is individually assessed based on a written assignment. All assignments must be submitted before moving on to the next module. All assignments will be assessed by the instructors using the same criteria as in the WMU M.Sc. programme.

MARITIME SAFETY: REQUIREMENTS AND IMPLEMENTATION

This module explains the IMO’s “Human Element” concept and briefly addresses the necessary supporting pillars. With a dedicated focus on safety, the module addresses key aspects of ship design and safety principles as related to the SOLAS requirements, particularly the concepts of seaworthiness, active & passive fire protection and lifesaving appliances. Contemporary systems/tools available to ensure safety of life at sea are discussed and the conduct of navigation and maritime operations are examined including possible risk control options such as vessel traffic management and pilotage. The module provides a broad overview and appreciation of safety management systems, and best practices in relation to the ISM Code implementation are analysed in detail.

Intended Learning Outcomes
By the end of this module, you should be able to:
- Understand the IMO’s approach towards the “Human Element” and elaborate on the main legal instruments (conventions, codes, etc.) that provide the necessary support
- Understand STCW requirements and obligations
- Identify the structure of SOLAS and related regulations
- Recognize the importance of LSA (life-saving appliances) and MES (marine evacuation systems) from a regulatory, commercial and manufacturing perspective
- Compare how changes to the SOLAS convention are accomplished and determine relevant exemptions
- Elaborate on ISM Code implementation issues
- Understand the interests involved in relation to sea traffic, pilotage and ship reporting systems and accident response
- Understand the legal obligations of coastal states to establish and maintain effective forces to respond to various accidents along their coastline

Course outline
- IMO’s “Human Element” vision
- Explaining conventions and regulations in relation to the Human Element
- The influence of STCW upon the maritime education and training domain
- The SOLAS Convention
- Seaworthiness, fire protection and life-saving appliances
- Bridge equipment and ergonomics
- External support towards the safe conduct of navigation
- Risk control: the ISM versus the ISPS Code
- Explaining safety management systems
- Breakdown of the ISM Code’s content and explaining the responsibilities on-board the ship and ashore
- Implementing and quality assurance issues of the ISM Code
- Record-keeping and safety incidents reporting
This module provides the fundamentals in port management and the port regulatory environment will be explained in detail. Operations and financial and marketing management will be analysed from a port perspective and the framework for introducing change to complex organizations will be discussed. Furthermore, the key concepts of port security, through studies of its regulation and instruments, will be examined and followed by a discussion of the current application of the said regulations and instruments, leading to both theoretical as well as practical knowledge in how to manage port security threats.

Intended Learning Outcomes
By the end of this module, you should be able to:
■ Identify the elements to be considered in modern port management
■ Explain port management basics including the role and function of port management and its trend in terms of ownership, funding, operations and planning
■ Discuss the different port governance models and the necessity of port reform
■ Describe the evolution of container terminals and their equipment in conjunction with global terminal operators
■ Recognize the nature and importance of ports to the national and/or regional economy
■ Examine contemporary issues in ports, particularly in terms of security

Course outline
■ Elements to be considered in modern port management
■ Global terminal operator(s)
■ The evolution of container terminals and their equipment
■ Port management basics
■ Public goods and public services in ports and port operations
■ Port governance models
■ Port reform tools
■ Port planning
■ Port aspect of the ISPS Code
■ Port security management
■ Crisis management best practices
These are the members of the programme development team. Additional instructors may be added.
GRADUATION AT WMU

Once you have fulfilled all of the requirements of the Postgraduate Diploma in Maritime Safety and Security, you will be invited to participate in the annual WMU Graduation Ceremony in Malmö, Sweden. Should you choose to attend the ceremony, you will join the WMU Ph.D., M.Sc. and Postgraduate Diploma graduates for the conferring of degrees by the Chancellor of WMU, the Secretary General of the International Maritime Organization (IMO).

WMU graduates are proven leaders in the maritime sector. Graduates leave WMU not only with the knowledge they need to succeed, but also with an extended network of contacts from around the world. Once you have completed the Postgraduate Diploma Maritime Safety and Security, you will join our global network of graduates.
CUSTOMIZED DELIVERY

Safety and security for the smooth operation of ships is a critical topic that is essential for a wide range of maritime professionals. The Maritime Safety and Security programme focuses on the needs of the maritime industry and the programme can be specifically tailored to address the needs of your company or organization. If you would like to learn about the possibilities of offering this programme as a customized delivery within your company, please contact us. We would be happy to work with you in developing a programme to achieve your objectives. Special arrangements, such as workshops, can also be arranged.
About DNV GL - Maritime Academy
DNV GL is actively engaged in the field of training and development, with its own dedicated Maritime Academy. For over 18 years, DNV GL's Maritime Academy has been offering courses in the field of shipping and continues to work towards its motto “Creating perspectives”.

Operating in more than 100 countries, our Academy managers in 17 key locations are dedicated to enabling you to effectively improve your business performance and to assist you in finding the best solutions for your daily business - to become safer, smarter and greener.

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About WMU - World Maritime University
The World Maritime University (WMU) in Malmö, Sweden is a postgraduate maritime university founded in 1983 by the International Maritime Organization (IMO), a specialized agency of the United Nations. The aim of WMU is to further enhance the objectives and goals of IMO and IMO Member States through education, research, and capacity building on maritime and ocean-related affairs to ensure safe, secure, and efficient shipping on clean oceans.

WMU offers M.Sc. and Ph.D. programmes, as well as professional development courses, with the highest standards in maritime and oceans affairs. With over 4,300 alumni from 166 countries across the globe, WMU graduates have a significant impact on the global maritime industry.

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