

C2.3 Programme Specification

Master of Science (MSc) in Sustainable Maritime Operations

Awarding Institution	University of Gibraltar		
Teaching Location	Europa Point Campus, Gibraltar		
Programme Title	MSc Sustainable Maritime Operations		
Final Award	Master of Science in Sustainable Maritime Operations		
Level of Qualification ¹	Level 7		
Mode of Delivery	FULL-TIME ☒ PART-TIME ☒ BLENDED ☒		
Minimum and Maximum Registration Period		Minimum registration	Maximum registration
	Full-time	1 years	2 years
	Part-time	2 years	4 years
Recognition by Professional, Statutory or Regulatory Body	None		
External reference points	The programme has been aligned with the UK QAA Master's Degree Characteristics. https://www.qaa.ac.uk/docs/qaa/quality-code/master's-degree-characteristics-statement.pdf?sfvrsn=6ca2f981_10		
Entry Requirements	Typically, an applicant should meet one of the following criteria: • A bachelor's degree (second-class honours or higher) in a relevant subject from a recognised institution, OR • An Officer in the Merchant Navy holding an STCW Management Level Certificate of Competency (COC) OR • An Officer in the Merchant Navy holding an STCW Operational Level Certificate of Competency (COC) with at least five years of experience at this level, OR • A first degree and a minimum of five (5) years of middle management experience in a maritime-related company. AND • Have essential ICT skills, such as word-processing, email and use of internet.		
English Language Requirements	If English is not the student's first language, they must have one of the following qualifications as evidence of English language skills: • IELTS: 6.5 with 5.5 minimum in each skill • Cambridge Certificate of Proficiency in English (CPE): Grade C • Cambridge Certificate of Advanced English (CAE): Grade B • Pearson Test of English (Academic): 60 with 51 in each component • IBT TOEFL: 90 with no subtest less than 17		
Faculty/Department	School of Maritime Science		
Date of Initial Approval	01-05-2024		
Date last reviewed	30-01-2025		

¹ UK Framework for Higher Education Qualifications

In the event of any inconsistency between the provisions of this Programme Specification and the provisions of the current University of Gibraltar Academic Regulations contained within the published Quality Handbook, the provisions of the current Academic Regulations shall prevail.

1. Programme Outline

The MSc Sustainable Maritime Operations is a leading postgraduate programme that equips both Seafarers and Shore-based professionals aspiring to deepen their knowledge and contribute to the sustainability of the maritime industry.

This two-year, blended learning programme consists of 180 credits at Level 7. It is structured into three main stages: Core Modules, Elective Modules, and a Research Project. Core modules cover essential topics such as sustainability principles, global maritime regulations, and strategic management. Elective modules allow students to explore specialised areas like environmental risk management, sustainable port operations, or maritime technology innovation, offering the flexibility to tailor their studies to their career aspirations and interests.

Students benefit from a blend of interactive online learning and in-person workshops that reflect the latest trends and innovations in the sector. The flexibility of elective modules allows students to personalise their learning experience, ensuring they develop the necessary competencies to succeed in their professional roles and contribute positively to sustainable maritime practices.

2. Programme Aim/s

This programme aims to develop maritime professionals who are capable of driving change and implementing sustainable solutions to shape a more environmentally responsible maritime industry.

The aims of this programme are to:

1. Prepare students for leadership roles in sustainable shipping operations, including careers in shipping companies, logistics firms, regulatory agencies, and environmental organizations.
2. Provide a deep understanding of the complexities of global supply chains and the critical role that shipping plays in ensuring their resilience and operational efficiency.
3. Develop deep understanding of international and national regulations governing shipping operations, such as the International Maritime Organization (IMO) guidelines.
4. Equip students with sustainable strategies and practices for reducing the environmental footprint of shipping operations. This may include exploring alternative fuels, energy-efficient technologies, and waste reduction measures.
5. Allow students to leverage technology for better decision-making and operational efficiency specially with the advancement of digitalization and data analytics in the shipping industry.

3. Programme Learning Outcomes

On successful completion of the programme the student will be able to:

A. Knowledge & understanding	• Demonstrate an advanced knowledge of the concepts, theories, principles and methodologies in sustainable maritime operations. • Apply contemporary relevant international maritime standards in the maritime industry. • Evaluate the concepts necessary for a critical appreciation of the diversity of stakeholder interests operating within the maritime sector and their role in development of sustainable shipping. • Critically evaluate the feasibility, environmental impacts, and operational implications of adopting alternative fuels and renewable energy in the maritime sector.
B. Intellectual Skills	• Critically analyse a range of sustainable maritime operations issues, drawing on evidence from theory, policy, research and practice. • Critically evaluate the relationship between theories and professional practice (where applicable). • Apply sustainable theories and concepts to a range of real-world contexts. • Synthesise and lucidly evaluate alternative views to commonly accepted perspectives. • Reflect on their skills, knowledge and understanding to support the development of critical thinking and understanding of personal and professional self.
C. Practical Skills	• Appraise the sustainability of the business environment in which shipping organisations operate, with particular emphasis on alternative fuels and renewable energy systems. • Evaluate the factors which influence port and maritime economics and how these apply to different trades and the various sectors of the maritime industry. • Apply safety and risk management techniques within the specialized context of maritime operations. • Plan and carry out complex projects such as independent research projects. • Understand the significance and limitations of theory and research. • Apply advanced project and data management techniques to maritime contexts, optimising decision making and operational efficiency.
D. Transferable Skills	• Express, present and defend ideas clearly and unambiguously in writing and through the spoken word. • Actively cooperate and/or collaborate with relevant stakeholders understanding of the multidisciplinary nature of the maritime sector. • Take responsibility for their learning and continuous personal development. • Demonstrate a systematic and methodical approach to working on projects, problem-solving or when developing new processes/policies. • Rationalise ethical decisions in the maritime domain in the practice of business and entrepreneurship.

4. Learning, Teaching and Assessment Strategy

The assessment's focus throughout at a level 7 standard. Assessment methods reflect the theoretical and practical approaches of the modules. Students will engage with independent and group study in a supportive framework of teaching and learning. The strategy is to use methods of teaching and learning that facilitate achievement of the aims of the programme. This is presented in a variety of formats, from in-class exercises, extended essays, seminar presentations, and project work, where appropriate to the level of study and the content of each module in the programme. Participatory learning forms the common core of all teaching and learning activities.

The assessment methods comprise both formative and summative assessment. The formative assessment is designed to assess students' progress and to serve as feedback to both students and lecturers. The formative assessment methods include prompt feedback on course work, individual and group feedback on participatory exercises, student presentations and case studies, as well as reflective papers. This progresses students' learning and provides an opportunity to feed forward into future summative assessments. The aim of the summative assessment is to determine whether the student has met the relevant module learning outcomes, which in turn contribute to the overall programme learning outcomes.

The standard to be attained via assessments requires the students to undertake independent research of given topics relevant to each course. The results of this research will need to be communicated in a manner appropriate to display comprehensive understanding, knowledge, and skills in each subject area. Where students are expected to incorporate an element of case study material into their assessed coursework, they are encouraged to draw upon their own experiences and interests. The variety of assessments incorporated within the modules has been designed to develop a broad range of defined skills, with a strong practical and employment focus.

The final assessment comprises a significant research project. The subject of this research project will be agreed by the student and the Programme coordinator together with advice from other module leaders involved in the delivery of the various modules.

Assessment can be a blend of diagnostic work to determine student needs, formative work submitted for assessment and feedback (but not necessarily for academic credit) or summative work submitted for academic credit. A range of assessment methods are used to assess the achievement of learning outcomes which may include:

- Continuous assessment
- Commentaries
- Discourse analysis
- Oral presentations
- Interpretation
- Discussion Questions
- Summative essays
- Dissertation

5. Programme content and structure

Programme Year	Module Code	Module Title	Credits	Semester	Compulsory / Elective
Year 1	MSMO72001	Maritime Operations and Safety Management	20	1	C
	MSMO72002	Project and Data Management	20	1	C
	MSMO72003	Future Fuel and Renewable Energy in Shipping	20	1	C
Year 1	MSMO72004	Maritime Spatial Planning and the Blue Economy (20 credits)	20	2	E
	MSMO72005	Innovation and Technology in Multimodal Supply Chains (20 credits)	20	2	E
	MSMO72006	Sustainable Shipping and Marine Environment (20 credits)	20	2	E
	MSMO72007	Maritime Law and Insurance (20 credits)	20	2	E
Year 2	MSMO71501	Research Methodology and Project Proposal	15	1	C
	MSMO74501	Research Project	45	2	C

This programme consists of 180 credits at Level 7. The programme comprises of Eight taught modules: Five compulsory core modules and three elective modules to suit student needs and career aspirations. For the final award, students must complete a research project on a chosen subject providing evidence of managing an investigation and demonstrating independent thinking and professional expertise.

Programme mode of delivery for a typical student studying the MSc Sustainable Maritime Operations part-time over two-years.

Mode of delivery		
Year / Semester	Modules	Delivery Mode
Year 1 Semester 1	Core Modules	On Campus / Online (Blended)
Year 1 Semester 2	Elective Modules	Blended online learning
Year 2 Semester 1 & 2	Research Methodology and Research project	Blended online learning

6. Variation/s to the Academic Regulations: Taught Programmes

None.

7. Programme credits and intermediate Awards (exit points)

Award	Credits	Credit level (FHEQ)
Postgraduate Certificate	60 credits	7
Postgraduate Diploma	120 credits	7
Master's Degree	180 credits	7

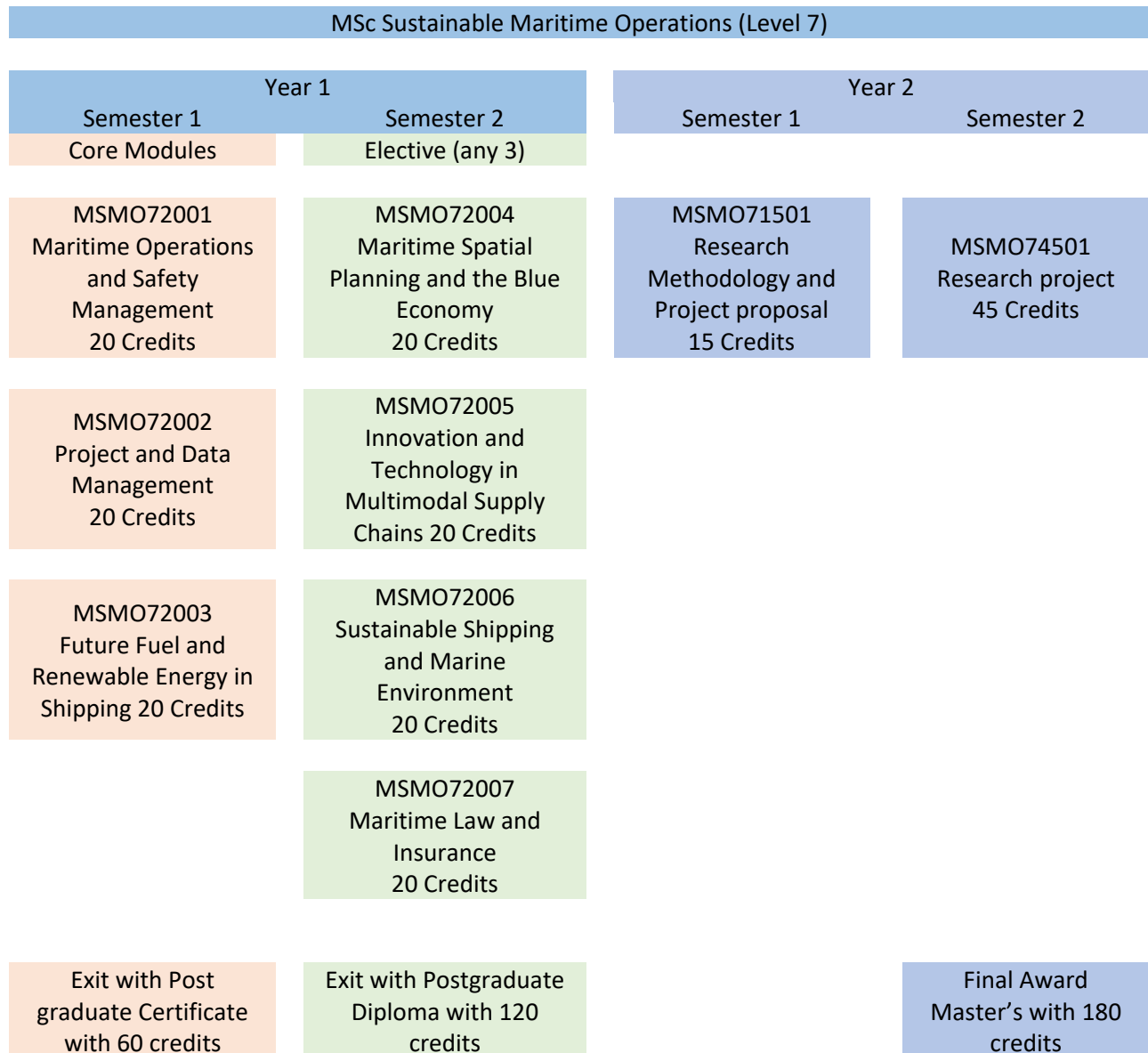
8. Career and Study Opportunities

Successful completion of this programme will equip students with the knowledge base and skills to be effective leaders in sustainable maritime operations, with specialisation of their choice. The programme's diverse content prepares graduates for roles that address current and future challenges in the maritime industry. Key areas of employment include:

- Port operations
- Ship management business
- Sustainable shipping analytics
- Freight forwarding and associated maritime logistics
- Environmental protection of waterways and the coast
- Maritime risk and safety management
- Decarbonisation strategy development in maritime operations
- Renewable energy and alternative fuel implementation in shipping

Although many possible career paths are not addressed directly in the programme, the research element provides the flexibility to focus on specific career interests, such as renewable energy innovation, advanced data management techniques, or sustainable port planning. This ensures students can pursue tailored paths in line with industry advancements and personal aspirations.

9. Programme Map



10. Assessment of Learning Outcomes

Assessment of learning outcomes will be as per each chosen module's "Knowledge and Understanding" and "Skills" learning outcomes as found within the module descriptors.

MAPPING OF PROGRAMME LEARNING OUTCOMES TO THE MODULES	MSMO72001	MSMO72002	MSMO72003	MSMO72004	MSMO72005	MSMO72006	MSMO72007	MSMO71501	MSMO74502
Knowledge and understanding									
Demonstrate an advanced knowledge of the concepts, theories, principles and methodologies in sustainable maritime operations.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Apply contemporary relevant international maritime standards in the maritime industry.	✓	✓	✓			✓	✓		
Evaluate the concepts necessary for a critical appreciation of the diversity of stakeholder interests operating within the maritime sector.	✓		✓	✓		✓	✓		
Evaluate the factors which influence port and maritime economics and how these apply to different trades and the various sectors of the maritime industry.		✓	✓	✓	✓	✓	✓		
Intellectual Skills									
Critically analyse a range of sustainable maritime operations issues drawing on evidence from theory, policy, and research.	✓	✓	✓	✓		✓	✓	✓	✓
Critically evaluate the relationship between theories and professional practice (where applicable).	✓		✓			✓	✓	✓	✓
Apply sustainable theories and concepts to a range of real-world contexts.	✓	✓	✓	✓		✓	✓		
Synthesise and lucidly evaluate alternative views to commonly accepted perspectives.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reflect on their skills, knowledge, and understanding to support the development of critical thinking and professional self.	✓	✓				✓	✓	✓	

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