Programme Specification

Master of Science (MSc)

In

Marine Science and Climate Change

Awarding Institution	University of Gibraltar
Teaching Location	Europa Point Campus, Gibraltar
Programme Title	Marine Science and Climate Change
Final Award	Master of Science (MSc)
Interim Awards	PGCert, PGDip,
Level of Qualification[1]	7
Mode of Delivery	FULL-TIME ☒ PART-TIME ☒
Minimum and Maximum Registration Period	<table><tr><th></th><th>Minimum registration</th><th>Maximum registration</th></tr><tr><td>Full-time</td><td>1 years</td><td>2 years</td></tr><tr><td>Part-time</td><td>2 years</td><td>4 years</td></tr></table>
Recognition by Professional, Statutory or Regulatory Body	None.
Benchmarks	There are no Master's level benchmark statements published by the QAA for environmental/biology-related subjects. For the marine undergraduate programmes, the relevant benchmark group is 'Earth Sciences, Environmental Sciences and Environmental Studies'. The programme has been aligned with the UK QAA Master's Degree Characteristics
Entry Requirements	A minimum of a second-class Honours degree (2.1 preferred) or equivalent in a relevant subject. Applicants from other disciplines with a 2:1 or 1st but with significant appropriate/relevant work/life experience are encouraged to apply. Maths and English (GCSE, Grade C, or equivalent). Essential ICT skills, such as word-processing, email and Internet.
English Language Requirements	If English is not the student's first language he/she 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

[1] UK Framework for Higher Education Qualifications

	Students must be able to communicate their ideas effectively in writing, in discussions and presentations.
Faculty/Department	Centre for Marine Science
Date of Initial Approval	10 May 2017
Date last reviewed	
Version Control	

Details	Date	Lead
New University of Gibraltar programme specification template - standardisation across all Univ. Gibraltar programmes	7 November 2019	Dr Awantha Dissanayake *MSc Programme Coordinator*
Programme Specification validation/approval	10 May 2017	Dr Darren Fa *Director of Academic Programmes and Research*

1. Programme Outline

The MSc in Marine Science and Climate Change programme has been designed blending elements of Marine Science programme whilst dedicated to promote understanding and advanced skills relating to marine and coastal Climate Change Adaptation and Ecological Disaster and Risk Reduction. The programme provides insights in to 'real-world' applications as well as maximising the skills of students to produce highly-skilled graduates with the specialist skills required to tackle ecological scenarios of the 21st Century.

2. Programme Aims

The aim of this programme is to meet industry needs by launching competent, experienced marine consultants and coastal managers into business, to meet the growing demand for truly multidisciplinary graduates within the growing environmental sector, particularly in the areas of Marine coastal zone management, area-based marine tools, environmental and biological conservation, climate change adaptation and disaster risk reduction.

3. Upon successfully completing this programme, students will be:
    1) ready for professional employment or engagement in a variety of marine-related fields including marine environmental consultancy, coastal planning, marine conservation, climate-driven ecosystem-based disaster risk assessments and environmental impact assessments among others;
    2) independent learners with a range of specialist research skills, which they can apply competently and professionally;
    3) capable, informed and skilled professionals who can carry out quality research, including the evaluation and critique of existing methodologies and the proposal of new hypotheses;
    4) sufficiently skilled to adapt to varying scenarios and different conditions;
    5) able to communicate their conclusions clearly to specialist and non-specialist audiences;
    6) fully literate in sustainability policy and practice.

4. Programme Learning Outcomes

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

A. Knowledge & Understanding	• Formulate informed judgements by comprehensive understanding and critical evaluation of the issues which drive coastal zone management • Evaluation of the concepts necessary for a critical appreciation of the diversity of stakeholder interests operating within the marine environment and their relationship to environmental change • Critical evaluation of concepts to demonstrate a thorough working understanding of the impact of the effects of climate change upon coastlines • Construct and formulate arguments based on a thorough understanding of the concepts of marine and coastal management, coastal change adaptation and ecosystem-based disaster risk reduction • Achieve a critical understanding of multidisciplinary approaches to marine consultancy

B. Intellectual Skills	• Create and critique proposals based on a comprehensive understanding and critical evaluation of the issues which drive coastal zone management • Critically evaluate concepts relating to marine and coastal management, coastal change adaptation and ecosystem-based disaster risk reduction
C. Practical Skills	• Apply a thorough interdisciplinary approach to the study of coastal marine ecosystems and the services they provide • Derive and communicate a thorough understanding of issues of ethics, conservation and stewardship of the marine environment, incorporating global and regional perspectives. • Use informed judgements and critically apply a thorough working understanding of the impact of the effects of climate change upon coastlines • Comprehensive achievement of the Programme Student Attributes
D. Transferable Skills	• Critical analysis of concepts and methodologies which enable understanding of multidisciplinary approaches to marine consultancy • Produce communication materials based on a thorough understanding of issues of ethics, conservation and stewardship of the marine environment, incorporating global and regional perspectives

5. Learning, Teaching and Assessment Strategy

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 will 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 particular content of each module in the programme. Participatory learning will form the common core of all teaching and learning activities.

Where students are expected to incorporate an element of case study material into their assessed coursework, they will be encouraged to draw upon their own experiences and interests. The variety of assessments incorporated within the core units has been specifically designed to develop a broad range of defined skills in the students, with a strong practical and employment focus.

The assessments have a crucial role in the development of transferable and subject-specific skills in the students. Students are encouraged to develop both their reading and analytical skills in the preparation and delivery of essays. Reports and presentations. The Dissertation is assessed in a specific structure which is designed to help the student develop his/her project and receive feedback from assessment during the course of its execution. All oral presentations that form part of assessed coursework will be assessed by a minimum of two members of staff.

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 diversity of assessment methods will be used to assess the programme which may include:

- Continuous assessment
- Commentaries
- Discourse analysis
- Oral presentations
- Unseen written examinations (including close reading exercises and/or essays)
- Interpretation
- Summative essays

- Dissertation

6. Programme content and structure

Level 7

Module Code	Module Title	Credits	Semester	Compulsory or Optional
MAR71501	Marine Biology, Ecosystems and Conservation	15	1	C
MAR71502	Oceanographic Processes	15	1	C
MAR71503	Research Skills and Methods	15	1	C
MAR71504	Coastal Zone Management: Area Based Marine Tools	15	1	C
MAR71505	Marine Ecosystems and Sustainability	15	2	C
MAR71506	Climate Change Adaptation	15	2	C
MAR71507	Ecosystem-based Disaster Risk Reduction	15	2	C
MAR71508	Capstone Project	15	2	C
MAR76009	Research-based Project	60	3	C
	TOTAL	**180**		

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

None.

8. 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

9. Career and Study Opportunities

Successful completion of this course would equip students with the knowledge base and skills to be effective managers and planners in marine coastal environments, with particular specialisms in strategies and approaches to adapt to and/or mitigate the effects of climate change in the marine environment. Such skills would be sought after in careers such as biological and environmental conservation, marine coastal management and planning, marine coastal engineering and policymaking.

The programme also provides a pathway for students interested in pursuing a research career. These could include marine biology and conservation, environment, tourism, geography and planning.

10. Programme Map (full-time)

Master's (LEVEL 7)

Semester 1	Semester 2	Semester 3
MAR71501 Marine Biology, Ecosystems and Conservation 15 credits	**MAR71505** Marine Ecosystems and Sustainability 15 credits	**MAR76001** Research-based Project 60 credits
MAR71502 Oceanographic Processes 15 credits	**MAR71506** Climate Change Adaptation 15 credits	
MAR71503 Research Skills and Methods 15 credits	**MAR71507** Ecosystem-based Disaster Risk Reduction 15 credits	
MAR71504 Coastal Zone Management: Area Based Marine Tools 15 credits	**MAR71508** Capstone project 15 credits	
CAN EXIT WITH **POSTGRADUATE CERTIFICATE 60 CREDITS**	CAN EXIT WITH **POSTGRADUATE DIPLOMA 120 CREDITS**	

KEY: COMPULSORY MODULE OPTIONAL MODULE

11. Assessment of Learning Outcomes

Upon completion of the program, students will be able to:	CORE MODULES								
	MAR71501	MAR71502	MAR71503	MAR71504	MAR71505	MAR71506	MAR71507	MAR71508	MAR76001
A. KNOWLEDGE AND UNDERSTANDING									
Formulate informed judgements by comprehensive understanding and critical evaluation of the issues which drive coastal zone management	FS		F	FS	FS	F	F	F	S
Interpretation and evaluation of the concepts necessary for a critical appreciation of the diversity of stakeholder interests operating within the marine environment and their relationship to environmental change			S	FS	F	FS	FS	F	S
Critical evaluation of concepts to demonstrate a thorough working understanding of the impact of the effects of climate change upon coastlines	F		F	FS	FS	FS	FS	F	S
Construct and formulate arguments based on a thorough understanding of the concepts of marine and coastal management, coastal change adaptation and ecosystem-based disaster risk reduction				FS	F	FS	FS	F	S
Achieve a critical understanding of multidisciplinary approaches to marine consultancy	F		FS	FS	FS	FS	FS	F	S
B. INTELLECTUAL SKILLS									
Create and critique proposals based on a comprehensive understanding and critical evaluation of the issues which drive coastal zone management		F	F	FS	F	F	F	F	S
Critically evaluate concepts relating to marine and coastal management, coastal change adaptation and ecosystem-based disaster risk reduction		F	F	FS	FS	FS		F	S
C. PRACTICAL SKILLS									
Apply a thorough interdisciplinary approach to the study of coastal marine ecosystems and the services they provide	F	F	FS	F	F	F	F	FS	S
Derive and communicate a thorough understanding of issues of ethics, conservation and stewardship of the marine environment, incorporating global and regional perspectives.	F	F	F	FS	FS	FS	FS	FS	S
Use informed judgements and critically apply a thorough working understanding of the impact of the effects of climate change upon coastlines	F	F	F	F	F	FS	FS	FS	S
Comprehensive achievement of the Programme Student Attributes	S	S	S	S	S	S	S	S	S
D. TRANSFERABLE SKILLS									
Critical analysis of concepts and methodologies which enable understanding of multidisciplinary approaches to marine consultancy	FS	FS	FS	FS	FS	S	S	FS	S
Produce communication materials based on a thorough understanding of issues of ethics, conservation and stewardship of the marine environment, incorporating global and regional perspectives	S	S	S	FS	FS	FS	FS	S	S

KEY **F** = Formative assessment **S** = Summative assessment **F S** = Formative AND Summative assessment