Programme Specification

Master of Science (MSc)

In

Environmental Science and Climate Change

Awarding Institution	University of Gibraltar
Teaching Location	Europa Point Campus, Gibraltar
Programme Title	Environmental 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	The benchmark statements published by the QAA for environmental/biology-related subjects is the 'Earth Sciences, Environmental Sciences and Environmental Studies'[2] and including achievement at master's level.
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 Students must be able to communicate their ideas effectively in writing, in discussions and presentations.
Faculty/Department	School of Marine and Environmental Science

[1] UK Framework for Higher Education Qualifications
[2] QAA (2022). Subject benchmark Statements: Environmental Science

Date of Initial Approval	February 2023
Date last reviewed	NA

1. Programme Outline

The MSc in Environmental Science and Climate Change programme has been designed blending elements of the Marine Science and Climate Change programme whilst dedicated to promote understanding and advanced skills relating to environmental and near-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 environmental management scenarios of the 21st Century.

2. Programme Aims

The aim of this programme is to meet industry needs by launching competent, experienced environmental consultants and managers to meet the growing demand for truly multidisciplinary graduates within the growing environmental sector. Areas of particular need are the 'Green Economy', environmental and wildlife management, area-based tools, environmental and biological conservation, climate change adaptation and ecosystem disaster risk reduction.

3. Upon successfully completing this programme, students will be:
    1) ready for professional employment or engagement in a variety of environmental science-related fields including environmental consultancy, terrestrial and coastal planning, 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 qualitative and quantitative research, including the evaluation and critique of existing methodologies and the proposal of new hypotheses;
    4) sufficiently skilled to adapt to varying environmental scenarios and conditions;
    5) able to communicate their conclusions clearly both 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 based on a comprehensive understanding and critical evaluation of the issues which drive terrestrial and near-shore coastal zone management and including applied scenarios such as change adaptation and ecosystem disaster risk reduction • Evaluation of the concepts necessary for a critical appreciation of the diversity of stakeholder interests operating within the environmental sector and their relationship to environmental change (local, regional and global) • Critical evaluation of concepts to demonstrate a thorough working understanding of the impact of the effects of climate change in terrestrial and near-shore environments • A comprehensive understanding of quantitative and qualitative research and environmental methods, and the ability to apply such methods in applied scenarios • Achieve a critical understanding of multidisciplinary approaches to environmental consultancy

B. **Intellectual Skills**	• Create and critique proposals based on a comprehensive understanding and critical evaluation of the issues which drive environmental management • Demonstrate understanding and critical evaluation of principles of ecology relevant to environmental science and application to nature conservation and wildlife management particularly with human land/coastal usage • Critically evaluate theory and concepts relating to environmental management, terrestrial and near-shore/coastal change adaptation and ecosystem-based disaster risk reduction in manner that will be innovative and at the forefront of applied environmental scenarios
C. **Practical Skills**	• Apply a thorough interdisciplinary approach to the study of terrestrial and near-shore ecosystems and the services they provide • Derive and communicate a thorough understanding of issues of ethics, conservation and stewardship of the 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 on terrestrial and near-shore environments • Critical understanding and application of theory and practice which informs and facilitates independent research
D. **Transferable Skills**	• Critical analysis of concepts and methodologies which enable understanding of multidisciplinary approaches to environmental consultancy • Produce communication materials based on a thorough understanding of issues of ethics, conservation and stewardship of the 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 reports, 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 communcation materials such as reports and presentations. The Dissertation is assessed in a specific structure, which is designed to help the student develop their 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
ESCC73001	Ecology, Conservation & Environmental Management	30	1&2	C
MSCC71503	Research Skills and Methods	15	1	C
MSCC71504	Coastal Zone Management: Area Based Tools	15	1	C
MSCC71505	Marine Ecosystems and Sustainability	15	2	C
MSCC71506	Climate Change Adaptation	15	2	C
ESCC71507	Ecosystem-based Disaster Risk Reduction	15	2	C
MSCC71508	Capstone Project	15	2	C
MSCC76001	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 environmental managers, with particular specialisms in strategies and approaches to adapt to

and/or mitigate the effects of climate change in the terrestrial and near-shore environments. Such skills would be sought after in careers such as biological and environmental conservation, environmental management and planning, coastal engineering and policymaking.

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

10. Programme Map (full-time)

Master's (LEVEL 7)

Semester 1	Semester 2	Semester 3
ESCC73001 Ecology, Conservation and Environmental Management 30 credits		
MSCC71503 Research Skills and Methods 15 credits	**MSCC71505** Ecosystems and Sustainability 15 credits	**MSCC76001** Research-based Project 60 credits
MSCC71504 Coastal Zone Management: Area Based Tools 15 credits	**MSCC71506** Climate Change Adaptation 15 credits	
	MSCC71507 Ecosystem-based Disaster Risk Reduction 15 credits	
	MSCC71508 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							
	ESCC73001	MSCC71503	MSCC71504	MSCC71505	MSCC71506	MSCC71507	MSCC71508	MSCC76001
A. KNOWLEDGE AND UNDERSTANDING								
Formulate informed judgements based on a comprehensive understanding and critical evaluation of the issues which drive terrestrial and near-shore coastal zone management and including applied scenarios such as change adaptation and ecosystem disaster risk reduction	FS	F	FS	FS	F	F	F	S
Evaluation of the concepts necessary for a critical appreciation of the diversity of stakeholder interests operating within the environmental sector and their relationship to environmental change (local, regional and global)		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 in terrestrial and near-shore environments	F	F	FS	FS	FS	FS	F	S
A comprehensive understanding of quantitative and qualitative research and environmental methods, and the ability to apply such methods in applied scenarios			FS	F	FS	FS	F	S
Achieve a critical understanding of multidisciplinary approaches to environmental 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 environmental management		F	FS	F	F	F	F	S
Demonstrate understanding and critical evaluation of principles of ecology relevant to environmental science and application to nature conservation and wildlife management particularly with human land/coastal usage		F	FS	FS	FS		F	S
Critically evaluate theory and concepts relating to environmental management, coastal change adaptation and ecosystem-based disaster risk reduction in manner that will be innovative and at the forefront of applied environmental scenarios	FS			S	FS	FS		S
C. PRACTICAL SKILLS								
Apply a thorough interdisciplinary approach to the study of terrestrial and near-shore ecosystems and the services they provide	F	FS	F	F	F	F	FS	S
Derive and communicate a thorough understanding of issues of ethics, conservation and stewardship of the environment, incorporating global and regional perspectives	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 on terrestrial and near-shore environments	F	F	F	F	FS	FS	FS	S
Critical understanding and application of theory and practice which informs and facilitates independent research	S	S	S	S	S	S	S	S
D. TRANSFERABLE SKILLS								
Critical analysis of concepts and methodologies which enable understanding of multidisciplinary approaches to environmental consultancy	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 environment, incorporating global and regional perspectives	S	S	FS	FS	FS	FS	S	S
KEY **F** = Formative assessment **S** = Summative assessment	**F** **S**							