MSc MARINE AND COASTAL ECOLOGY

Institute of Science & Environment

Academic Level:	7	**Credits:**	180
UCAS Code:	Not applicable		
Awarding Body:	University of Cumbria		
Delivery Site:	Fusehill Street		
Programme Length:	Standard Length 1 year Maximum Registration 5 years		
Mode of Delivery:	Face-to-Face		
Pattern of Delivery:	Full time		
	Total weeks of study:	36 weeks	
	Delivery pattern:	3 x 12-week semesters	
	Standard semester dates:	Yes	
Programme Webpage:	https://www.cumbria.ac.uk/study/courses/postgraduate/msc-marine-and-coastal-ecology/		

Entry Criteria
The University's standard criteria for admissions apply. Please refer to the Applicant Information pages of the University website for more information. For RPL, please refer to the University website. Detailed criteria for admission to this programme can be found on the programme webpage (currently being developed).

PROGRAMME AIMS AND OUTCOMES

Programme Aims

By the end of this programme learners will be able to:

1. Apply specialist knowledge and skills required for a successful career in marine and coastal science.
2. Attain and apply appropriate higher transferable skills within marine ecology and research project management.
3. Conduct multidisciplinary reviews based on in-depth critical evaluation of appropriate evidence and case studies.
4. Conduct robust critical thinking to apply an adaptive mindset in planning, implementing and management of coastal and marine ecology projects.
5. Demonstrate skills to lead on marine ecology projects.
6. Disseminate complex information to a variety of audiences using a broad range of formats and media types.

Programme Outcomes – Knowledge and Understanding

The programme provides opportunities for you to develop and demonstrate the following:

After 60 credits of study (PGCert) you will be able to demonstrate:

K1. Comprehensive knowledge and understanding of current marine environmental issues resulting from a wide range of causes.

K2. In-depth knowledge and understanding of natural and social science research methods to allow critical analysis of current marine and coastal environmental / conservation issues and priorities across spatial scales (local, regional, national and international).

K3. Understanding of how to conduct critical assessments on the human dimensions of marine and coastal environments and how to develop evidence-based actions to address them.

After 120 credits of study (PGDip) you will be able to demonstrate:

K4. The original and novel application of data sets to investigate unique marine environmental / conservation scenarios and to develop and apply evidence-based solutions.

K5. Ability to apply knowledge and understanding in project management for effective implementation and best practices in natural resource management.

K6. Knowledge and understanding to deal with complex issues, both systematically and creatively, to identify evidence-based outcomes and to develop and deliver effective dissemination activities that inform a wide range of audiences, from specialists to the general public.

After 180 credits of study (MSc) you will be able to demonstrate:

K7. Knowledge and understanding of the importance of working effectively within a project team setting and developing and managing partnerships.

K8. Critical evaluation of and reflection of relevant research literature to make informed management decisions.

K9. The ability to transfer evidence-based findings into practice and evaluate effectiveness in different contexts.

Programme Outcomes – Skills and other Attributes

The programme provides opportunities for you to develop and demonstrate the following:

After 60 credits of study (PGCert) you will be able to demonstrate:

S1. Expertise in research, technical communication and professional skills.

S2. Robust data analysis skills to develop actions appropriate for addressing diverse marine science issues.

S3. Professional written and verbal communication skills that allow effective and appropriate dissemination of information across a range of audiences.

After 120 credits of study (PGDip) you will be able to demonstrate:

S4. Ability to effectively manage complex marine science projects.

S5. Effective skills in seeking external funding.

S6. Initiative, enthusiasm and adaptability in investigating and problem-solving issues.

After 180 credits of study (MSc) you will be able to demonstrate:

S7. Ability to present complex scientific information in a variety of forms and to discuss, debate and evaluate a range of marine environmental / conservation management strategies.

S8. Successful project management and development / maintenance of partner relations.

PROGRAMME FEATURES

Programme Overview

The world's oceans are under unprecedented pressure from unsustainable, anthropogenic demands that are driving rapid changes in global processes and resources, with cascading impacts on ecosystems and biodiversity. The IUCN's 2023 State of the Ocean report highlighted that "our oceans face the triple planetary crises of climate change, biodiversity loss and pollution, threatening food security, economies, and the very resilience of coastal communities worldwide" (IUCN, 2023).

According to UNEP's Global Ocean Assessment (2021), overfishing has left one-third of the world's fish stocks exploited beyond sustainable levels, while FAO's State of World Fisheries and Aquaculture (2022) noted that 90% of marine fish stocks are either fully fished or overfished. Plastic pollution now affects more than 800 marine species through ingestion, entanglement, or habitat alteration (UNEP, 2022). Ocean warming and acidification are accelerating coral reef decline, with the IPCC (2021) projecting that even under a 1.5°C warming scenario, up to 90% of coral reefs could be lost by mid-century. Coastal ecosystems such as mangroves, saltmarshes, and seagrass beds—critical for biodiversity, carbon storage, and shoreline protection—are being destroyed at alarming rates, with over 35% of global mangroves and 30% of seagrasses already lost (UNEP-WCMC, 2020).

Despite the ocean covering 70% of the Earth's surface, just 8% of the marine environment is under formal protection, and less than 3% is fully protected from extractive activities (Protected Planet, 2023). The IUCN Red List (2022) indicates that one-third of assessed marine mammals, one-third of reef-building corals, and over 30% of sharks and rays are threatened with extinction. Since 1970, marine vertebrate populations have declined by nearly 50% on average (WWF Living Planet Report, 2020).

The UK, as a maritime nation, is no exception. Over 60% of its marine species and habitats are considered to be in "unfavourable" or "declining" condition (JNCC, 2019). Coastal development, aquaculture, shipping, and pollution continue to erode ecological integrity in estuaries and coastal seas such as the Irish Sea, Solway Firth, and Morecambe Bay.

Governments are beginning to respond with ambitious targets. The UK Marine Strategy (DEFRA, 2019), the Environment Act (2021), and the Environmental Improvement Plan (2023) commit to restoring 70% of designated features in Marine Protected Areas to favourable condition by 2042. Globally, the 2022 UN Biodiversity Conference (COP15) set a landmark "30x30" goal to protect 30% of the ocean by 2030, alongside commitments to reduce plastic pollution, halt species extinctions, and safeguard ecosystem services.

Meeting these goals demands a new generation of professionals trained in marine and coastal ecology. Projects now require leaders and specialists who can integrate field ecology, advanced data analysis, spatial planning, and stakeholder engagement to tackle complex and urgent marine challenges. Traditional experiential learning is no longer sufficient; instead, marine scientists must be equipped with cutting-edge research skills and interdisciplinary understanding to address the Anthropocene's realities.

This Master's programme responds directly to these global and national priorities. It provides you with the essential knowledge, applied skills, and professional competencies required of a modern marine and coastal ecologist, preparing you to lead research, management, and policy initiatives at the highest level.

Learning and Teaching

Teaching

The programme will be delivered from the Institute of Science and Environment (IoSE) at the Fusehill Street campus in Carlisle, located close to the Solway Firth and its diverse estuarine habitats and fisheries. This geographical setting provides immediate access to a variety of marine and coastal environments that directly support the delivery of marine science programmes.

Over a number of years, researchers in the Institute have developed an international research portfolio. These activities include studies of climate change impacts on oceans, marine biodiversity monitoring, fisheries science, blue carbon and ecosystem services, marine pollution, and coastal ecosystem management. This provides the research-guided perspective and contemporary academic knowledge to support your studies while maintaining a strong emphasis on experiential teaching and applied marine research.

The University prides itself on teaching excellence which 'brings together theory and practice in a powerful combination to provide exceptional learning that is both inspirational for you and relevant to the workplace'. A variety of teaching and learning methods are employed throughout the programme to ensure you acquire and develop appropriate concepts, knowledge, professional and personal skills. These include traditional methods such as lectures and seminars, but we also embed experiential learning experiences as a foundation of learning and development through field-based case studies and experimental fieldwork in coastal and estuarine systems. The academic team utilise live marine projects and case studies to demonstrate process, methodologies, analysis of results and formulation of conclusions and argument. You are then provided with opportunities to undertake research-based experiential learning to test and develop your own skills and understanding, followed by opportunities for self-reflection to identify where further development of knowledge, practice or skill acquisition is necessary.

Fieldwork and Residential Study

In addition to fieldwork in local areas (potentially such areas as the Solway Firth, Morecambe Bay, and Irish Sea), students will participate in a residential field course to a tropical international location. This immersive experience allows students to engage directly with coral reef and tropical marine ecosystems. Activities include species identification, biodiversity assessments, reef health monitoring, and ecological survey techniques. The field course provides a unique opportunity to apply ecological concepts in an international context, compare temperate and tropical ecosystems, and experience first-hand the challenges of managing marine biodiversity in a region under significant human and climatic pressures.

The emergence of new methods of course delivery has increased the complexity of determining a course's optimal delivery mode. As a team, we will seek to undertake systematic approaches, such as the Course Delivery Decision Model (CDDM), that helps make pedagogically sound decisions

regarding the delivery modes that best target students' learning outcomes. For example, 'assessment for learning' is a commonly used phrase describing the theory that assessments can be utilised within service to facilitate learning as opposed to just measuring it. The following 'features' support instructional utility and will be included in this programme:

1. Coherence with the enacted curriculum
2. Items and tasks that support deeper thinking
3. Results at the appropriate grain size to support useful feedback
4. Results that inform instruction

Such actions will support and facilitate students' learning and development, assisting their personal and academic progression.

Learning and Teaching Methods include:

- Lectures
- Seminars, workshops, presentations and discussion
- Individual and group tutorials
- Use of case studies
- Project work, both individual and in groups
- Fieldwork and visits (e.g., estuarine surveys, intertidal ecology, fisheries monitoring, tropical field course)
- Training and practice in the use of IT and specialist software packages (e.g., GIS, R, remote sensing tools)
- Problem-based learning
- Reading and interpreting marine research publications and professional reports

The location of our Fusehill Street campus, with access to the Solway Firth and nearby coastal habitats, allows for the learning and teaching environment to extend beyond the lecture theatre whenever possible. Students who also wish to engage in independent study projects outside of the campus grounds are supported. Off-campus access to IT resources and specialist software packages is also provided.

Overview of the methods of learning and teaching used on the programme:

At Level 7 you typically have around 6 contact hours per week, typically consisting of:

- 2 hours of lectures
- 2 hours of seminars
- 2 hours of lab work, fieldwork, etc.
- Additional personal tutor meetings may be requested, and module tutors can also be approached for individual module support.

Independent Learning

When not attending scheduled learning activities you will be expected to continue learning independently through self-study. Whilst there will be weekly variations in the number of hours that you dedicate towards self-learning, the average is estimated at 15–16 hours per week.

Lectures

The core theory and underpinning knowledge, needed for your studies, will be delivered via lectures within modules. Whilst most lectures will be delivered within classrooms / lecture theatres, some will be delivered in the field.

Practical sessions

These sessions provide the hands-on practical skills required of a marine scientist and the opportunity to engage with experiential learning to both broaden and deepen your understanding of relevant practices required to work within the sector.

Tutorials

Tutorials provide an opportunity for you to consolidate your knowledge and learning within a friendly environment that allows you to explore thinking. Tutorials can be conducted as either a group or one-to-one session and are planned and structured within modules to help embed your understanding of the content.

Seminars

Opportunities for wider open discussion and debate are provided via seminars that allow exploration of complex topics and to voice one's own experiences or different perspectives and reflection on topics.

Problem-based learning

Allows directed, experiential learning, either within teams or individually, to engage with content that often reflects the application of either knowledge or practice within 'real-world' marine and coastal contexts.

Directed/independent study

Can vary between modules as the types of involvement to be engaged with, ranging from reading published literature that is highlighted to engaging with digital resources on Blackboard (our virtual learning environment, VLE). It is important that every effort is made to engage with all the additional resources and materials made available to you within modules.

Research-informed teaching

Research-informed teaching underpins all the delivery types and content/materials presented within modules. Integrating recent research findings from marine ecology, fisheries, and pollution science into the curriculum provides you with up-to-date knowledge and real-world context. For example, using case studies on marine protected areas, climate-driven species shifts, or plastic pollution impacts allows you to critically analyse methodologies, results, and implications of current research.

Field-based modules incorporate research techniques and methodologies commonly used in ongoing marine studies, such as biodiversity assessments, ecological monitoring, or the use of GIS in habitat mapping. For instance, you might participate in intertidal surveys, benthic sampling, or fisheries stock assessment exercises using the latest tools and techniques, replicating methods from contemporary marine science. This hands-on experience with cutting-edge research tools and techniques equips you with relevant skills and fosters an appreciation for the role of research in informing sustainable management and conservation practices.

Involving active researchers and practitioners as guest lecturers or through collaborative projects can provide you with insights into the latest advancements in marine science. For example, you could engage in discussions with researchers working on topics such as ocean warming, marine spatial planning, or the recovery of threatened species. These interactions expose you to ongoing research challenges, encourage critical thinking, and inspire you to consider how you might contribute to the field through your own research initiatives or professional practice.

Field Trips

Fieldwork and residential study are central to this programme, providing immersive opportunities to apply ecological theory to real-world marine and coastal systems. Students will take part in both regional field excursions and an international residential trip.

Regional Fieldwork (UK)

Throughout the programme, students will undertake structured field trips to a variety of sites across northwest England and the wider UK coast. These provide direct experience with a range of temperate marine and coastal habitats, species, and management challenges. Potential fieldwork sites could include:

- **Solway Firth** – intertidal and estuarine ecology, saltmarsh vegetation surveys, benthic invertebrate sampling, and waterbird use of intertidal habitats.
- **Morecambe Bay** – large-scale estuarine dynamics, mudflat ecology, shellfish harvesting impacts, and ecosystem services.
- **Irish Sea** – fisheries and offshore ecology, including participation in a research trip with the North West Inshore Fisheries and Conservation Authority (IFCA) to learn about gear selectivity, bycatch, and stock monitoring.

North Sea rocky shores – surveys of rocky intertidal communities, zonation patterns, and the ecological adaptations of species to tidal gradients and wave exposure.

These field trips not only strengthen technical skills in species identification, ecological monitoring, and data analysis, but also provide insight into the socio-economic and governance aspects of UK coastal and marine resource management.

International Residential Field Course

A key highlight of the programme is a 7-day international residential field course to a tropical (or subtropical) marine location. This field course offers students the chance to study one of the most biodiverse and ecologically important marine regions in the world. Activities include:

- **Coral reef ecology** – quantitative assessments of reef health using transects and quadrats, coral identification, and monitoring of bleaching and disease.
- **Reef fish communities** – underwater visual census techniques, size-frequency analysis, and exploration of trophic guilds and fish functional groups.
- **Mangroves and seagrass ecosystems** – surveys of associated biodiversity, carbon storage potential, and habitat connectivity for fish and invertebrates.
- **Conservation and management challenges** – case studies in marine protected area management, tourism impacts, and climate-related pressures such as warming seas and coral bleaching.

The residential field course allows students to compare temperate UK ecosystems with tropical systems, enhancing their understanding of global marine ecology and providing first-hand experience of tropical marine field techniques.

Teaching Staff

The teaching team for this programme includes academic and professional staff members from the Institute of Science & Environment, with strong expertise in marine and coastal science. The programme is delivered by a research-active academic team with contributions from a diverse and complementary set of invited guest lecturers. The delivery team's research interests span intertidal ecology, saltmarsh and mangrove ecology and restoration, coral reef ecology and management, fisheries biology and management, and marine and coastal environmental impact assessment.

Programme delivery is enhanced by the team drawing upon many years of international experience across North America, Europe, the Caribbean, the Middle East, the Asia-Pacific region and the UK, offering case studies and practical insights into the challenges of managing marine ecosystems and fisheries, and the solutions being applied in different cultural and ecological contexts.

You will be supported in adapting to life on the Fusehill Street campus through a vibrant induction week programme, campus support staff, dedicated one-to-one sessions with your nominated personal tutor, and a wide range of university student support services.

We work closely with a range of local, national, and international marine organisations to ensure that this programme provides the knowledge and skills required for a successful career within the marine and coastal sector. Examples of organisations we work with include the International Union for Conservation of Nature (IUCN), UN Environment Programme (UNEP), Marine Management Organisation (MMO), Natural England, the Joint Nature Conservation Committee (JNCC), and NGOs such as the Marine Conservation Society, Marine Stewardship Council, RSPB, and local Wildlife Trusts. We also collaborate with Inshore Fisheries and Conservation Authorities (IFCAs), aquaculture companies, and marine environmental consultancies to ensure applied skills development.

Graduates from marine and coastal ecology programmes at the University of Cumbria and partner institutions have gone on to secure positions in marine conservation NGOs, government agencies, international development organisations, aquaculture and fisheries bodies, zoos and aquaria, and ecological/environmental consultancies. This MSc is designed to prepare you to take up similar opportunities and contribute effectively in a global marine science context.

Student Feedback and Module Evaluation

Student feedback will be sought via the University of Cumbria's centralised module evaluation systems. This protocol has been implemented across the university's programme since 2024-25 and enables lecturers to aggregate student feedback, including access to extensive quantitative metrics on student engagement, gathered using an automated and consistent system. Closing the feedback loop through reflexive appraisal of student module evaluations, addressed by the Module Leader identifying actions and reporting these back to the student body in a timely manner, ensures that students are aware that their input is valued and acted upon. This system helps to continuously raise the standard of teaching in modules and assure that they are aligned with student learning.

Assessment

Our assessment strategy aligns with the University's Learning, Teaching and Assessment Strategy and the Curriculum Design Framework. The overarching consideration is to provide assessments, which develop your skills and knowledge while equipping you for postgraduate employment. Assessments will therefore often mirror the type of work that you will encounter in your future careers and may include:

- Field projects
- Computer-based assessments
- Problem solving activities
- Critical analysis of case studies
- Oral, audio-visual and poster presentations
- Dissertation
- Peer and self-assessment
- Group work
- Online blogs
- Mock grant proposal

Formative assessment tasks provide opportunity for collaborative working enabling you to assess, develop and critically evaluate practical skills and methodologies supporting work required throughout summative assessment. Throughout the programme, you are expected and encouraged to be active in your learning and to apply current thinking to practice. Modules each have one summative assessment, apart from Research Skills and the Dissertation which both have two.

Feedback

A variety of informal and formal feedback mechanisms are included within the learning design to support your progression and professional development. Informal feedback may be delivered on an individual or group basis, through synchronous or recorded asynchronous mechanisms, and may include, for example, knowledge checks, verbal, audio, written comments or summaries, peer-review and worked examples. In line with UoC policy, formal feedback on summative assessments will be provided within 20 working days of submission. It will be based on grading criteria linked to the module learning outcomes and aligned to the UoC grade descriptors. Taking a consistent approach across the programme, the feedback will demonstrate how the grade was derived in relation to performance against the grading criteria and identify ways for you to improve in future.

Graduate Prospects

The MSc in Marine and Coastal Ecology at the University of Cumbria is designed to equip you with the skills, knowledge, and practical experience needed to address contemporary marine environmental challenges. Graduates of this programme are highly sought-after in various fields due to their expertise in applied marine conservation, ecological research, environmental impact

assessment, and fisheries management skills, making them well-suited for roles in conservation, academia, government, NGOs, and private sectors

Current Career Prospects

Marine and Coastal Organizations and NGOs

Graduates can find roles in leading marine-focused organisations such as WWF, Marine Conservation Society, Blue Marine Foundation, RSPB (seabird and marine divisions), and local Wildlife Trusts. Common roles include Marine Ecologist, Fisheries Officer, Coastal Project Manager, and Marine Biodiversity Specialist. Typical responsibilities may involve underwater or intertidal surveys, fisheries monitoring, habitat restoration (e.g., saltmarsh, seagrass, or oyster reefs), community engagement, and implementing marine conservation strategies.

Government and Public Sector Roles

Positions in government bodies such as the Marine Management Organisation (MMO), Natural England, Joint Nature Conservation Committee (JNCC), Inshore Fisheries and Conservation Authorities (IFCAs), and the Environment Agency focus on marine policy development, fisheries regulation, environmental management, and regulatory enforcement. Typical job titles include Marine Environmental Officer, Fisheries Scientist, and Marine Protected Areas Manager.

Marine and Environmental Consultancy

There are opportunities to work with consultancies specialising in marine and coastal environmental impact assessment, offshore renewable energy, port development, and aquaculture. These roles often involve marine ecological surveys, benthic sampling, fisheries impact assessments, hydrodynamic modelling, data analysis, and producing reports to support development consents and marine licences.

Research and Academia

Opportunities exist in academic institutions or research organisations as research assistants, marine ecologists, or PhD candidates. Graduates may contribute to studies on topics such as marine pollution, climate-driven species shifts, coral reef management, and fisheries science. These roles involve fieldwork, laboratory analysis, publishing research findings, and influencing policy and practice in marine science.

Private Sector Roles

Companies in sectors like offshore renewable energy (wind, wave, tidal), oil and gas decommissioning, shipping, aquaculture, and tourism increasingly seek marine and coastal scientists to ensure sustainability and compliance with environmental standards. Job roles include Marine Environmental Consultant, Offshore Ecology Specialist, and Sustainability Manager.

Future Career Prospects

Advancement to Leadership Roles

With experience, graduates can move into senior positions such as Marine Programme Director, Fisheries Policy Advisor, or Head of Marine Conservation. Leadership roles often involve strategic planning, fundraising, stakeholder negotiation, and managing large-scale marine projects.

Specialisation and Niche Roles

As the marine field evolves, there is a growing need for specialists in areas such as marine spatial planning, blue carbon, deep-sea ecology, and restoration of critical habitats like mangroves and seagrass meadows. Graduates may develop niche expertise in fisheries modelling, tropical reef ecology, or marine pollution monitoring.

International Marine Science and Conservation

Opportunities to work with international NGOs, intergovernmental bodies (e.g., UNEP, FAO, IUCN), or overseas marine projects are expected to expand, particularly in coral reef regions, small island states, and biodiversity hotspots. Roles include International Marine Specialist, Tropical Field Project Coordinator, and Capacity Development Advisor.

Emerging Fields: Technology and Data Analytics

The integration of technology into marine science (e.g., drones, remote sensing, autonomous underwater vehicles, acoustic telemetry) creates new opportunities for graduates with technical skills in ecological modelling, big data analysis, and digital mapping. New roles such as Marine Data Analyst, Remote Sensing Specialist, and Fisheries Modeller are likely to be in demand.

Policy and Advocacy

Graduates may influence marine policy by working with think tanks, advocacy groups, and international bodies to shape legislation and treaties on marine biodiversity, fisheries management, and climate change. Roles in policy development, advocacy, and marine environmental law are becoming increasingly prominent.

Academic Prospects

PhD and Research Opportunities

Graduates may pursue further academic qualifications such as a PhD, often focusing on specialised research areas within marine and coastal ecology. Universities, research institutes, and conservation organisations frequently offer funding for projects on coral reef management, estuarine ecology, fisheries science, marine protected areas, or climate change impacts on the ocean.

Academic Careers:

There are opportunities to teach and mentor the next generation of conservationists as lecturers, researchers, or professors. Involvement in academic research allows for continued contributions to scientific literature and participation in global conservation discussions.

Collaborative Research Projects:

Partnerships between universities, conservation NGOs, and government bodies provide avenues for collaborative research, allowing you to work on impactful, large-scale marine science initiatives.

MODULES

Year 1			
Code	**Title**	**Credits**	**Status**
CMEM7001	Marine and Estuarine Ecology	20	Compulsory
CMEM7002	Marine and Coastal Pollution	20	Compulsory
CMEM7003	Research Skills	20	Compulsory
Students exiting at this point with 60 credits of study would receive a PGCert in Marine and Coastal Ecology			
CMEM7004	GIS, Remote Sensing and Marine Spatial Planning	20	Compulsory
CMEM7005	Fisheries Biology and Management	20	Optional
CMEM7006	Marine Vertebrate Ecology and Conservation	20	Optional
CMEM7007	Tropical Marine Ecology	20	Compulsory
Students exiting at this point with 120 credits of study would receive a PGDip in Marine and Coastal Ecology			
CMEM7008	Dissertation	60	Compulsory
Students exiting at this point with 180 credits of study would receive a MSc in Marine and Coastal Ecology			

Key to Module Statuses	
Compulsory modules	Must be taken although it may be possible to compensate as a marginal fail (within the limits set out in the Academic Regulations and provided that all core or pass/fail elements of module assessment have been passed).
Optional modules	Are a set of modules from which you will be required to choose a set number to study. Once chosen, it may be possible to compensate as a marginal fail (within the limits set out in the Academic Regulations and provided that all core or pass/fail elements of module assessment have been passed).
Optional modules may be subject to availability and viability. If we have insufficient numbers of students interested in an optional module in any given academic year, this may not be offered. If an optional module will not be running, we will advise you as soon as possible and help you choose an alternative module. Optional modules are normally selected 3 - 5 months in advance.	

Timetables

Timetables are normally available in the first week of September. Please note that while we make every effort to ensure timetables are as student-friendly as possible, scheduled learning can take place on any day of the week.

Our Timetabling team work hard to ensure that timetables are available to students as far in advance as possible, however there may be occasional exceptions such as in the case of teaching which falls outside of the usual academic calendar. The UoC academic calendar runs from July to July, so timetabling information for programmes which include teaching sessions in August may not be published until closer to the August delivery.

ADDITIONAL INFORMATION

Student Support

The Student Enquiry Point is a simple way to contact Student Services. Using the Student Enquiry Point tile on the Student Hub you can submit an enquiry to any of the Student Services teams, which includes:

- Careers and Employability
- Chaplaincy for faith and spiritual wellbeing
- Mental Health and Wellbeing
- Digital Skills
- Disability and Specific Learning Difficulty (SpLD)
- International Student Support
- Library
- Money Matters
- Safeguarding
- Skills@Cumbria
- Sports and Fitness Facilities
- University Student Accommodation

As a student at the University of Cumbria you automatically become a member of the Students' Union. The Students' Union represents the views and interests of students within the University.

The Students' Union is led by a group of Student Representatives who are elected by students in annual elections. They also support approximately 400 Student Academic Reps within each cohort across the entire University. The Students' Union represent the views of their cohort and work with academic staff to continuously develop and improve the experience for all University of Cumbria students. You can find out more about who represents you at www.ucsu.me.

You can email at any time on studentvoice@cumbria.ac.uk.

Course Costs

Tuition Fees

Course fees can be found here: https://www.cumbria.ac.uk/study/student-finance/postgraduate/

The following course-related costs are included in the fees:

- Access to desktop computers on campus and laptops available in the IT Suite for you to sign out and use free of charge.
- You can install key software and apps free of charge for use on your own devices for the duration of the programme.
- The costs of most UK based field trips and visits are included in the fees.

Additional Costs

The following course-related costs are not included in the fees:

Stationery and IT

Stationery for your own personal use (pens, papers and folders, etc.). Whilst you choose how much you need, expect to pay around £40-£50 per year for these.

Field notebook (£10 - 15).

Laboratory notebook (£10 - 15).

Clothing and Equipment

Essential:

Waterproof jacket and trousers (£150 - 200).

Walking boots (£50 - 150).

Warm hat and gloves (£30).

Wellington boots (£20 - 100+).

Rucksack (ideally with waterproof cover) or dry bag for day use (£30 - 50).

Other outdoor clothing e.g. thermals, fleeces, socks, etc. (prices vary).

Recommended:

Thermos, water bottle and lunchbox for field trips (prices vary).

Binoculars (prices vary).

Mask, fins, and snorkel (prices vary)

Rashguard or 0.5 mm wetsuit for tropical field trip (prices vary)

Field Trips

The programme includes several field trips in the UK. Many of these are covered in your course fees, but others may incur costs which will vary depending on the activity, typically £20 - 60.

The cost of the one-week tropical marine field trip would typically be around £1500-2000 which includes flights, transport, bed and breakfast accommodation, in-country travel, marine park entrance fees, guide fees and cost of excursions. It is assumed that the student will pay airfare costs, while the university will cover in-country costs. Equipment rental or purchase (including tank fills) for SCUBA diving and/or snorkelling will be borne by the student. You will also need to budget around £20 per day for other meals. Vaccinations and anti-malaria treatment may be required, these typically cost £80 - 120 and you may want other spending money to use when on the trip. Attendance on the field trip is mandatory.

Field trips will be designed to be inclusive of students with disabilities wherever possible. Students with disabilities that preclude them from field trips will be given alternative learning and opportunities. One potential example might be a virtual field trip given using AI and virtual reality technology.

Books

The University library holds copies of core texts (including many eBooks, accessible online) but you may wish to purchase your own copies of textbooks or field guides for use on field trips and in your own time. The cost of these varies greatly depending on edition and condition.

Exceptions to the Academic Regulations

This programme operates in accordance with the University's Academic Regulations and Academic Procedures and Processes.

External and Internal Benchmarks

The Qualifications Framework's level descriptor for the master's degree includes generic information that all holders of the master's qualification can do, which includes the following:

Master's degrees are awarded to students who have demonstrated:

- a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study or area of professional practice.
- a comprehensive understanding of techniques applicable to their own research or advanced scholarship.
- originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline.
- conceptual understanding that enables the student:
    - to evaluate critically current research and advanced scholarship in the discipline.
    - to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

Typically, holders of the qualification will be able to:

- deal with complex issues - both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences.
- demonstrate self-direction and originality in tackling and solving problems and act autonomously in planning and implementing tasks at a professional or equivalent level.
- continue to advance their knowledge and understanding, and to develop new skills to a high level.

And holders will have:

- the qualities and transferable skills necessary for employment requiring:
    - the exercise of initiative and personal responsibility.
    - decision-making in complex and unpredictable situations.
    - the independent learning ability required for continuing professional development.

An MSc is considered an example of specialised or advanced study, which aim to prepare students for the next stage in their careers, whether that is further academic or professional study, or entering or progressing within employment of different kinds. Thus, QAA's 'Characteristics Statement' for Master's degrees are as follows:

- they are usually predominantly composed of structured learning opportunities (are 'taught'). Frequently, at least a third of the course is devoted to a research project, leading to a

dissertation/comparable research output or the production of other output such as an artefact, business plan, performance or musical composition.
- they include research methods training, which may be provided in a range of different ways (for example, through content modules).
- related awards, such as postgraduate certificate and postgraduate diploma, will often be offered as stages in the progression to a specialised/advanced study master's degree to facilitate continuing professional development at different stages of a professional career.

Equally, this MSc can qualify, under QAA criteria, as a 'Professional' master's degree, which characteristic statements are:

- learning tends to be structured, and course structure may be developed in collaboration with the relevant 'professional, statutory and regulatory bodies' (PSRB) or employer, and may include practical elements, such as fieldwork, placements or other opportunities for work-based learning, as well as a project undertaken through independent study.
- they include research methods training, which may be provided in a range of different ways (for example, through content modules).
- in the case of integrated master's degrees that fall within this type, master's level study is integrated with study at honours degree level within a single course. The second characteristic above applies to the master's level part of the overall award.
- they may be a prerequisite for registration or entry to a profession in accordance with the requirements of the PSRB that recognises or accredits the award.
- related awards, such as postgraduate certificate and postgraduate diploma, are often offered as stages in the progression to a professional/practice master's award to facilitate continuing professional development at different stages of a professional career.

Alternatively, the Office for Students' (OfS) has its own 'Sector-recognised standards', which state that students at L7 will demonstrate:

- a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study or area of professional practice.
- a comprehensive understanding of techniques applicable to their own research or advanced scholarship.
- originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline.
- conceptual understanding that enables the student: a) to evaluate critically current research and advanced scholarship in the discipline; b) to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

Typically, holders of the qualification will be able to:

- deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences.
- demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level.

- continue to advance their knowledge and understanding, and to develop new skills to a high level.

And holders will have:

- the qualities and transferable skills necessary for employment requiring:
    - the exercise of initiative and personal responsibility.
    - decision-making in complex and unpredictable situations.
    - the independent learning ability required for continuing professional development.

Regarding MSc level sector statements, the OfS states (pg.9): "Much of the study undertaken for masters' degrees is at, or informed by, the forefront of an academic or professional discipline. Successful students show originality in the application of knowledge, and they understand how the boundaries of knowledge are advanced through research. They are able to deal with complex issues both systematically and creatively, and they show originality in tackling and solving problems. They have the qualities needed for employment in circumstances requiring sound judgement, personal responsibility and initiative in complex and unpredictable professional environments".

QAA's 'Subject Benchmark Statements' for the 'Earth Sciences, Environmental Sciences and Environmental Studies' (ES3) sector are set within the wider context of the ongoing climate emergency and biodiversity crisis, as well as other threats to the marine environment. Actions are required at every level, from global to national political commitment to practical measures at a local level. Graduates in ES3 subjects will be required to ensure actions and decisions are based on sound science, and that they take into account equity, equality, diversity and inclusivity to deliver long-term, sustainable solutions. ES3 is characterised by the following common skills and knowledge:

- a focus on understanding physical, chemical and biological Earth systems in order to learn from the past, understand the present and influence the future.
- an appreciation of societal contribution and context.
- an emphasis on practical investigation.
- multidisciplinary and interdisciplinary approaches.
- the ability to work across a range of spatial and temporal scales.
- the development of skills in observation and analysis to support decision-making in the light of uncertainty.
- the ability to recognise and understand complex relationships through systems thinking.
- the development of professional skills and competencies that enhance employability.
- an understanding of the contribution the subject knowledge, skills and behaviours can make towards a sustainable future.

Furthermore, ES3 communities have a duty to confront and encourage the dismantling of all barriers to engagement and participation in our disciplines. particularly valuing different cultural perspectives, ways of knowing and lived experience. The ES3 subjects are a route to justice through delivery of the UN Sustainable Development Goals and diverse perspectives are essential to confronting global grand challenges. An understanding of the United Nations Sustainable Development Goals (SDGs) is essential to the vision of ES3 subject areas. In the context of Environmental Sciences, competence with emerging good practices, survey and data analysis

techniques, knowledge of current legislation and policy, and the ability to identify the impacts on the environment from activities will be expected.

Subject Benchmark Statements set out the minimum threshold standards that an ES3 undergraduate degree student will have after they are awarded an honours degree; these are listed under the category headings 1) Intellectual skills (knowledge and understanding), 2) Practical skills, 3) Communication skills, 4) Personal and professional skills (located on pages 16 & 17 of QAA's ES3 benchmark statements report). Additionally, at the MSc level it is expected that students will build upon the competencies cited for ES3 undergraduate studies plus focus in greater depth on a specific aspect of the subject area, achieving knowledge and skills to enhance their employability.

Disclaimer

This programme has been approved (validated) by the University of Cumbria as suitable for a range of delivery modes, delivery patterns, and delivery sites. This level of potential flexibility does not reflect a commitment on behalf of the University to offer the programme by all modes/patterns and at all locations in every academic cycle. The details of the programme offered for a particular intake year will be as detailed on the programme webpage: https://www.cumbria.ac.uk/study/courses/postgraduate/msc-marine-and-coastal-ecology/