PROGRAMME SPECIFICATION	

1	**Awarding Institution**	Newcastle University
2	**Teaching Institution**	Newcastle University
3	**Final Award**	MSc
4	**Programme Title**	MSc Marine Conservation and Sustainability
5	**UCAS/Programme Code**	5158F
6	**Programme Accreditation**	IMarEST
7	**QAA Subject Benchmark(s)**	Environmental Studies (ES3) Biosciences
8	**FHEQ Level**	7
9	**Date written/revised**	July 2025

10. Programme Aims

The aim of this programme is to launch competent, experienced, and interdisciplinary marine scientists into UK and global workforce to meet the growing demand for critical thinkers, innovators and practitioners within the growing sector of marine conservation and sustainability.

1. To give students from a range of backgrounds a common level of knowledge and understanding of marine conservation and sustainability challenges around the world, and the assessment of these in a contemporary marine research or consultancy context.
2. To enable such students to gain knowledge and understanding of the role of science, policy, technology and development in the context of coastal and marine natural resources and environment .
3. To provide students with an appreciation of the need for, and mechanisms to achieve, sustainability in the marine environment, and the role that interdisciplinary research plays in achieving this.
5. To enable students to understand the social, political and economic context in which international marine researchers must work.
6.To produce high quality, multi- and inter-disciplinary graduates armed with business skills and hands-on research experience, for the marine sector.
7. To provide a programme consistent with Level 7 of the FHEQ.

11. Learning Outcomes

1. Mastering an interdisciplinary approach to the study of marine conservation and sustainability that encompasses both landward (such as communities' socio-economically dependent on marine resources) and seaward (for example, sustainable marine energy) concerns.
2. The principles, theory and practice of marine research and management that span social and ecological disciplines
3. Knowledge of biodiversity, social-ecological systems, ecosystem services, physical and biological processes, developing technologies and function of coastal ecosystems that provide the resource base for communities in tropical and temperate regimes.
4. Understanding and use of social science methodologies to research and environmental management.
5. The role of governance in marine management focussing on advances in policy for addressing the development, management and use of coastal resources at local, national and international levels.
6. A broad portfolio of subject-specific knowledge and understanding related to marine research, drawn from various modules on, coastal production systems, marine research and evaluation, environmental impact assessment and research skills.

7. Applications of multi-disciplinary and interdisciplinary approaches to advancing marine research, drawing as appropriate from the natural and social sciences and where possible, based on real life case studies.

Knowledge and Understanding

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas. The programme outcomes have references to the benchmark statements for Knowledge and Understanding.

1. On completing the programme students should have: Mastered an interdisciplinary approach to the study of coastal and marine environments around the world, gaining awareness of socio-ecological as well as scientific and technical aspects of coastal and marine management.
2. Knowledge of biodiversity, social-ecological systems, ecosystem services , physical and biological processes, developing technologies and functions of coastal ecosystems and the resources that these provide in tropical and temperate regimes.
3. Understanding and use of both natural social/economic science methodologies to support project formulation and appraisal in support of environmental assessment and management, in a research or consultancy context.
4. Understanding of the role of governance in marine environmental issues, focussing on advances in policy for addressing the development, management and use of coastal resources at local, national and international levels, and the implications of these for environmental research or consultancy in the marine environment.
5. A broad portfolio of subject-specific knowledge and understanding related to marine research, drawn from various modules on coastal production systems, marine policy and management, marine resource mapping and evaluation, environmental impact assessment and marine environmental research skills.
6. Applications of multi-disciplinary and inter-disciplinary approaches to marine research and consultancy, drawing as appropriate from the natural and social sciences and where possible, based on real life case studies from around the world.
7. An understanding of the principles of environmental consultancy and be aware of both common tools and new developments employed in the industry in different countries.
8. An understanding of the ecological, social and political climate in which the environmental research and consultancy must work.

10. An understanding of the principles of project planning and management and the ability to apply these to small scale research and consultancy projects.

A1. Appreciated interdisciplinary approaches to the study of integrated coastal management that encompasses both landward (e.g. communities' socio-economically dependent on marine resources) and seaward (e.g. sustainable ecosystem exploitation) concerns.
A2. Grasped the principles, theory and practice of integrated coastal management.
A3. Gained knowledge of biodiversity, economic goods and services, physical and biological processes, developing technologies and functions of coastal ecosystems that provide the resource base for coastal communities.
A4. Increased understanding and ability to use social science methodologies for project appraisal and environmental management.
A5. Comprehended roles of governance in coastal management focussing on advances in law and policy for addressing the development, management and use of coastal resources at local, national and international levels.
A6. Gained a broad portfolio of subject-specific knowledge and understanding related to coastal management, drawn from modules on coastal production systems, governance, marine environmental research, and environmental impact assessment.
A7. Applications of multi-disciplinary and inter-disciplinary approaches to advancing tropical coastal management, drawing as appropriate from the natural and social sciences and where possible, based on real life case studies.

Teaching and Learning Methods

Knowledge and understanding (A1-A7) are developed mainly through lectures/seminars/tutorials/fieldwork, case-histories, case studies and development and practice of research skills. A3 is further developed in a scientific literature study in which learning is reviewed by peer assessment, formative and summative assessment. A1 to A7 are supplemented by active participatory exercises involving role-playing, seminars, teamwork and communication to solve problems and facilitate learning by experience. A6 is initially developed through hands-on experience in the first instance through fieldwork studying both inter and sub-tidal habitats, based on the rocky shore and RV Princess Royal respectively. It is subsequently then facilitated by internal and external staff through core modules using a variety of methods including lectures, participatory exercises, interactive seminars, guided self-study and workshops. A reflective learning logbook allows students to consider the wider relevance of their learning in the workplace (A7).

Assessment Strategy

Knowledge and understanding (A1 to A7) is summatively assessed by unseen written examination and written reports, including the literature review as part of the research project. Formative assessment is by individual tutoring, feedback on written work (at various stages) and individual and group feedback in participatory exercises and case studies.

Intellectual Skills

On completing the programme students should have:

1. Awareness of, ability to identify, access and make critical use of sources of information on the economic, environmental, legal, political, social, scientific, technological and other aspects of coastal management; integrating and evaluating information and data from a variety of sources.
2. Skills in practical marine survey, data exploration, numerical analysis and application of statistical methods to field, survey and experimental data related to coastal management, with the ability to make decisions from data, interpret published results in a meaningful way and formulate useful inferences.
3. The ability to design, plan (including contingency planning) and execute independent marine environmental consultancy studies, based either at the desk or in the field. Including the selection and application of appropriate mathematical and computer-based methods for modelling and analysing relevant problems, as required.
4. The ability to take a creative holistic approach to solving problems, applying professional judgements to balance risks, costs, benefits, safety, reliability, aesthetics and environmental impact, with the experience required to identify suitable analytical and assessment methods for solutions to consultancy challenges, working with relevant financial constraints and legislative frameworks.
5. Synthesis and presentation of data and ability to produce professional quality reports suitable for international, national and local research bodies and consultancies and their clients, particularly government agencies.
6. Dissemination of key information and communication with specialists and/or non-specialists on a range of coastal and marine issues of relevance to marine research and consultancy.
7. A thorough understanding of the business and enterprise aspects of environmental research and consultancy and the range and diversity of specialist markets that operate within the marine sector.

The ability to formulate competitive project plans, tender documents and business plans for the marine consultancy sectors, applying general principles to specific consultancy situations.

On completing the programme students should be:

B1. Aware of and able to identify, access and make critical use of sources of information on the environmental, legal, political, social, scientific, technology and other aspects of coastal management.

B2. Capable of data exploration, numerical analysis and application of statistical methods to field, survey and experimental data related to marine research and coastal management – ability to make decisions from data, interpret published results in a meaningful way and formulate useful inferences.
B3. Able to design, plan (including contingency planning) and execute independent field studies, both shore and boat based, with coastal management applications.
B4. Able to synthesise and present data and able to produce professional quality reports suitable for international, national and local agencies.
B5. Capable of dissemination key information and communication with specialists and/or non-specialists on a range of coastal issues.

Teaching and Learning Methods

Subject specific skills B1 and B2 are introduced, applied and reinforced in several modules allowing practical applications to be learned and practiced in different situations. B3 and B4 are introduced through case studies and research project proposals and developed in the final consultancy project, which is individually supervised before and after the research proposal has been evaluated and approved. B is demonstrated in a number of modules and applied in fieldwork. A number of modules develop aspects of experimental and survey design and report preparation as part of lectures/seminars, case studies and group-led field exercises.

Assessment Strategy

Subject-specific skills (B1 and B2) are assessed by practical reports, essays and literature reviews. B3 and B4 are mainly assessed as part of the research project, including separate evaluations of the study plan, literature review and research paper. Aspects of experiment/survey design and presentation (B3 and B4) are also assessed by practical reports and literatures reviews. B5 is assessed through a number of modules including the research project.

Practical Skills

On completing the programme students should be able to:

C1. Synthesise, summarise and integrate existing information and critically assess different sources of information.
C2. Collect new data and information and incorporate with existing knowledge – present this information in different formats to make clear to those targeted.
C3. Design and implement information-gathering strategies in an efficient and cost-effective way.
C4. Apply knowledge and understanding of coastal management to familiar and unfamiliar problems such as identifying and resolving stakeholder conflicts.

Cognitive Skills

1. Synthesise, summarise and integrate existing information and critically assess different sources of information.
2. Collect new data and information and incorporate with existing knowledge – present this information in different formats to make clear to those targeted.
3. Design and implement information-gathering strategies in an efficient and cost-effective way.
4. Critically appraise assessment methodologies within a research and commercial consultancy environment.
5. Critically evaluation tools and techniques based on financial as well as technical merit; employing good professional judgement to balance risks, costs and benefits.
6. Apply knowledge and understanding of the marine environment to familiar and unfamiliar problems, such as identifying and resolving stakeholder conflicts or balancing commercial and environmental priorities for clients.

Teaching and Learning Methods

These skills are challenged through literature views (C1) introduced at the start of the programme and form a major part of the research project. C2 and C3 are developed in the research project, during field exercises with data gathering and data mining exercise. Students develop cognitive skills (C4) through problem-solving exercises and case studies from real-life environmental projects.

Assessment Strategy

Synthesis, critical use and understanding of information (C1) is assessed by written reports of independent exercises including the research project. C2 and C3 are assessed by

written reports in the research project and one other compulsory module. C4 is assessed by practical and case study reports and the reflective learning logbook.

Transferable/Key Skills

1. Effective verbal and written communication appropriate to the intended audience.
2. Numerical skills, including survey and experimental design, data collection, data handling, analysis and presentation using a range of packages.
3. Analytical skills – including policy and legal analysis, spatial planning and analysis.
4. Critical and effective use of IT including internet resources, reference managers and other software packages as a means of communication and source of information.
5. Independent study skills, self-organisation and time-management.
6. Teamwork and interpersonal skills, including identifying individual and collective goals and responsibilities, managing meeting and schedules, recognising and respecting the views of others, conflict resolution and building consensus.

Project design, resourcing and budgeting skills, understanding of business and enterprise.

On completing the programme students should:

D1. Have effective verbal and written communication appropriate to the intended audience.
D2. Be able to use numerical skills, including survey and experimental design, data collection, data handling, analysis and presentation using a range of packages.
D3. Be capable of making critical and effective use of IT including internet resources, reference managers and other software packages as a means of communication and source of information.
D4. Possess independent study skills, self-organisation and time management.
D5. Have teamwork and interpersonal skills, including identification of individual and collective goals and responsibilities, management of meetings and schedules, recognition and respect for the views of others, conflict resolution and building consensus.

Teaching and Learning Methods

Key skills (D1 to D5) are introduced and developed across all modules via hands-on exercises. The application of these skills is also assessed in a variety of modules, different situations and intended audiences, including the final research project. Numerical skills (D2) are developed using a series of exercises, particularly in NES8010 and NES8312. Independent study (D4) is promoted in all the modules including the final research project, whereas teamwork (D5) is practiced in group exercises in several modules.

Assessment Strategy

Communication skills (D1) are assessed by oral presentations and written reports in a number of modules. Numerical, IT and independent study skills (D2 to D4) are assessed by practical reports, literature reviews and the research paper. Teamwork skills (D5) are assessed by individual reports on group work and by group reports supplemented by *viva voce* assessment of organisation and interpersonal skills.

12 Programme Curriculum, Structure and Features

Basic structure of the programme

The MSc is normally a one-year programme, consisting of modules totalling 180 and 120 credits worth of study respectively. Common to both are taught modules totalling 100 credits which provide structured learning over 22 weeks from September to March. The taught component comprises compulsory (120 credits) modules. . A core of three 20-credit compulsory modules are taken by all Ecology and Environment PGT programmes in SNES. This ensures that all students across the school have a solid foundation in both the quantitative and qualitative skills that are essential in modern ecological science. Two of these modules will be taught in Semester 1, so that students benefit from peer-support, and all reach a similar high technical standard before diverging into the different individual degree programmes. At the discretion of the Degree Programme Director and within timetabling constraints, students can substitute other modules from throughout the University for semester two modules. The MSc has an additional Consultancy project

carries a value of 60 credits. See Annex for list of modules and specific knowledge, understanding and skills outcomes.

The aim of the programme is to provide existing professionals and graduates with a flexible training programme leading to recognised postgraduate and professional qualifications, while facilitating increased levels of interaction between Newcastle University, commercial companies, professional bodies and other organisations operating across the marine sector, nationally and internationally.

To achieve this it will capitalise upon the excellent array of discipline-based science and engineering master's level courses already available within the university, developing additional new material only to provide the interdisciplinary linkages to deliver successful IMEC graduates with the necessary holistic approach. In addition, core governance, legal, policy and management components are augmented by more taught consultancy, business planning and enterprise aspects.

Alongside specific existing enterprise and entrepreneurship modules there is an intensive 'consultancy' module. This involves two taught weeks of seminars in semester 2, delivered by partner organisations, describing 4-month consultancy projects that each MSc student has a chance to work on in the final semester. Once topics and partner organisations are selected, students develop a marine project for assessment with the relevant UK/EU or International consultancy. This activity is focused on collaboration with regional, national and international businesses, and yields significant benefits, for the programme and school strategies for engagement.

Key features of the programme (including what makes the programme distinctive)

A distinguishing and defining feature of this MSc is that it is taught by a multi-disciplinary team that aims for and repeatedly adopts an interdisciplinary approach to integrated coastal management with due consideration given to ecological and social aspects from both a landward and seaward viewpoint. It actively seeks research collaborations with local, UK/EU and International consultancies, stimulating marine science engagement and offering students unique opportunities to work with the best marine research organisations and consultancies worldwide.

Programme regulations (link to on-line version)

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13 Support for Student Learning

Generic information regarding University provision is available at the following link.
Generic Information

14 Methods for evaluating and improving the quality and standards of teaching and learning

Generic information regarding University provision is available at the following link.
Generic Information

Accreditation reports

Institute of Marine Engineering, Science & Technology (IMarEST)

Additional mechanisms

There is informal discussion throughout the year with teachers, module leaders and the Degree Programme Director and several cases in recent years of changes in assessment and deadlines in response to student needs.

15 Regulation of assessment

Generic information regarding University provision is available at the following link.
Generic Information

In addition, information relating to the programme is provided in:

The University Prospectus: https://www.ncl.ac.uk/postgraduate/
Degree Programme and University Regulations: http://www.ncl.ac.uk/regulations/docs/

Please note. This specification provides a concise summary of the main features of the programme and of the learning outcomes that a typical student might reasonably be expected to achieve if she/he takes full advantage of the learning opportunities provided.