PROGRAMME SPECIFICATION	

1	**Awarding Institution**	Newcastle University
2	**Teaching Institution**	Newcastle University
3	**Final Award**	MSc / Pg Diploma
4	**Programme Title**	International Marine Environmental Consultancy
5	**Programme Code**	5158 / 3420
6	**Programme Accreditation**	None currently / IMarEst and CIWEM sought
7	**QAA Subject Benchmark(s)**	Environmental Studies (ES3)
8	**FHEQ Level**	7
9	**Date written/revised**	June 2008

10 Programme Aims

The aim of this programme is to meet industry needs by launching competent, experienced marine consultants and coastal managers into UK and European business, to meet the growing demand for truly multidisciplinary graduates within the growing environmental sector.

1. To give students from a range of backgrounds a common level of knowledge and understanding of marine environmental issues and the assessment of these in a contemporary marine consultancy business context.
2. To enable such students to gain knowledge and understanding of the role of science, policy, technology and development in the marine environment.
3. To enable such students to gain knowledge and understanding of business principles and practice and the role of enterprise and to actively apply this knowledge to marine consultancy.
4. To provide students with an appreciation of the need for, and mechanisms to achieve, sustainability in the marine environment, and the role that environmental consultancy plays in achieving this.
5. To enable students to understand the social, political and economic climate in which marine environmental consultancies must work.
6. To produce high quality, multi- and inter-disciplinary graduates armed with business skills and hands-on consultancy experience, for the marine sector.
7. To provide a programme consistent with Level M of the FHEQ.

11 Learning Outcomes

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. On completing the programme students should have:

A1. Mastered an interdisciplinary approach to the study of coastal and marine environments around the world, gaining awareness of socio-economic as well as scientific and technical aspects of coastal and marine management.

A2. Knowledge of biodiversity, economic goods and services, physical and biological processes, developing technologies and functions of coastal ecosystems and the resources that these provide.

A3. An understanding of both natural and social/economic science methodologies to support project formulation and appraisal in support of environmental assessment and management, in a consultancy context.

A4. Understanding of the role of governance in marine environmental issues, focussing on advances in law and policy for addressing the development, management and use of coastal resources at

local, national and international levels, and the implications of these for environmental consultancy in the marine environment.

A5. A broad portfolio of subject-specific knowledge and understanding related to marine environmental consultancy, drawn from various modules on coastal production systems, coastal governance, integrated coastal management, marine resource mapping and evaluation, environmental impact assessment, sustainable world aquaculture, remote sensing, fisheries management and marine environmental research skills.

A6. Knowledge of multi-disciplinary and interdisciplinary approaches to marine consultancy, and awareness of applications of both the natural and social sciences. Where possible, this will be based on real life case studies.

A7. An understanding of the principles of environmental consultancy and be aware of both common tools and new developments employed in the industry.

A8. An understanding of the economic, social and political climate in which the environmental consultancy industry must work.

A9. An understanding of the life cycle of a business from set up to liquidation including business plans, and the nature of enterprise.

A10. An understanding of the principles of project management, and the ability to apply these to small scale consultancy projects.

Teaching and Learning Methods

Knowledge and understanding (A1 to A10) are developed mainly through lectures/seminars/tutorials/ fieldwork, case-histories, case studies and development and practice of research and consultancy skills. A7 to A10 are further developed during the final consultancy project. Specialisms within A5 are developed further in a scientific literature study in which learning is reviewed by peer review, formative and summative assessment. A1 to A5 are supplemented by active participatory exercises involving role-playing, seminars, teamwork and communication to solve problems and facilitate learning by experience. A6 is facilitated chiefly by external speakers from consultancy partner organisations, who deliver case study based seminars using a variety of methods including lectures, participatory exercises, interactive seminars, guided self-study and workshops. A8-A9 focus upon case study visits (fieldwork) and critical evaluation/presentation of a current enterprise environment, exercises and practical activities develop further learning. A7-10 involve the development of a business case and project plans for assessment. A reflective learning logbook allows students to consider the wider relevance of their learning in the workplace (A7-A8) and assessment of an individual reflective report by students on the development of their business awareness and skills (A7-10).

Assessment Strategy

Knowledge and understanding (A1-10) is summatively assessed by unseen written examination and written reports, including a literature review as part of the consultancy project. Final assessment of overall environmental consultancy skills (A1-10) is assessed by project plan, presentation and written report. Specific business and project planning skills (A7-10) are summatively assessed through unseen written examination, written reports and a competitive tender for the consultancy project. Reflective learning is assessed through a marked 'logbook' (A7-10). Formative assessment is by individual tutoring, feedback on written work (at various stages) and individual and group feedback in participatory exercises and case studies throughout (A1-A10).

Intellectual Skills

On completing the programme students should have:

B1. Awareness of, and 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.

B2. Skills in 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.

B3. The ability to design, plan (including contingency planning) and execute independent marine environmental consultancy studies, based either at the desk or in the field; and the project management skills to ensure that these are delivered to meet time, cost and quality objectives specified by consultancy clients. Including the selection and application of appropriate mathematical and computer based methods for modelling and analysing relevant problems, as required.

B4. 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.

B5. The ability to synthesise and present data, and to produce professional quality reports suitable for international, national and local consultancies and their clients, particularly government agencies.

B6. The ability to disseminate key information and communicate with specialists and/or non-specialists on a range of coastal and marine issues of relevance to consultancy.

B7. A thorough understanding of the business and enterprise aspects of environmental consultancy, and the range and diversity of consultancy specialist markets that operate within the marine sector.

B8. The ability to formulate competitive project plans, tender documents and business plans for the marine consultancy sector, applying general principles to specific consultancy situations.

Teaching and Learning Methods

Subject specific skills B1 and B2 are introduced, applied and reinforced across several modules allowing practical applications to be learned and practised in different situations, through case studies, field work and during the final consultancy project. B3 and B4 are introduced through case studies and consultancy project proposals, and developed in the project, which is individually supervised before and after the proposal has been evaluated and approved, by both academic and business supervisors. B3-B5 are demonstrated in a number of modules and applied in fieldwork, culminating in a final consultancy report, produced to industry standards and assessed partly by formal presentation. B6 is taught throughout the course as the production of written reports and oral presentations, to a variety of audiences (academic, business and role-playing exercises during workshop scenarios), form an integral part of most modules. 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. B7 and B8 are comprehensively taught during enterprise and project management modules through case studies and workshops, examination, production of reports and reflective learning. These build up to the production of a competitive consultancy project plan, used as the basis for selection of final projects. The following 3 month consultancy project then allows students to develop and apply skills B1-B8 to established consultancy problems, identified with partner organisations to be of real relevance to the industry.

Assessment Strategy

Subject-specific skills (B1-B2) are assessed by practical reports, essays and literature reviews. B3-B4 are mainly assessed as part of the consultancy project, including separate evaluations of the project plan, background literature review consultancy report and final presentation of work. Aspects of experiment/survey design and presentation. B5-B6 are assessed through a number of modules including the consultancy project, and summative and formative presentations during several modules. B7-B8 are assessed by project plan, presentation and written report. Specific business and project planning skills (B7-B8) are summatively assessed through unseen written examination, written reports and a competitive tender for the consultancy placement. B3-B6 are further tested in all combinations of optional modules, by practical reports and literature reviews. All of these skills B1-B8 will be comprehensively tested during the final consultancy 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. Critical appraisal of assessment methodologies within a commercial consultancy environment.

C5. Critical evaluation of tools and techniques based on financial as well as technical merit; employing good professional judgement to balance risks, costs and benefits.

C6. 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 developed through literature reviews (C1) introduced at the start of the programme and form a major part of the consultancy project. C2 and C3 are developed in the consultancy project, during field exercises and in all optional modules with data gathering and data mining exercises. Students develop practical business skills (C4) through problem-solving exercises and case studies from real-life environmental projects. C5-C6 are developed during modules via case studies and the

development of business cases and the consultancy project proposals, and developed in the project, which is individually supervised before and after the proposal has been evaluated and approved, by both academic and business supervisors. The following 3 month consultancy project then allows the student to develop and apply practical skills C4-C6 to real consultancy problems, developed with industry partners.

Assessment Strategy

Synthesis, critical use and understanding of information (C1) are assessed by written reports of independent exercises including literature reviews and the consultancy project. C2 and C3 are assessed by written reports in the consultancy project and one other compulsory module. C3-C5 will be assessed as part of the consultancy project, including separate evaluations of the project plan, background literature review consultancy report and final presentation of work, all of which will involve tight controls of time, cost and quality and assessment of risk. C4 and C6 are assessed by practical and case study reports, a reflective learning logbook and individual reflective report. Aspects of experiment/survey design to include consideration of cost-effectiveness (C3-C6) are assessed by written report and oral presentation for the consultancy project, as well as in compulsory modules by practical reports and literature reviews.

Transferable/Key Skills

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. Have analytical skills; including policy and legal analysis, spatial planning and analysis skills.

D4. 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.

D5. Possess independent study skills, self-organisation and time-management.

D6. Possess teamwork and interpersonal skills, including the ability to identify individual and collective goals and responsibilities, managing meetings and schedules, recognising and respecting the views of others, conflict resolution and building consensus.

D7. Project management, resourcing and budgeting skills, understanding of business and enterprise.

Teaching and Learning Methods

Key skills (D1 to D5) are introduced in the Marine Environmental Research Skills module via hands-on exercises and accompanying workbooks. The application of these skills is also assessed in a variety of modules (optional and compulsory), different situations and reports/presentations developed to convey the learning to different intended audiences. These skills are essential to the completion of the consultancy project. Numerical skills (D2) are developed using a series of exercises, as are GIS and spatial planning skills (D3). Analytical skills (D3) are developed through workshops and group work during compulsory modules, and can be expanded during optional modules. Literature analysis skills (D4) are essential to the majority of modules and are formally assessed during each piece of written coursework. Independent study (D5) is promoted in library research projects, individual reflective assessments and the final project, whereas teamwork (D6) is practised in group exercises and workshops in several modules, and will also be expected to be a critical part of the final project, working as part of a team in a consultancy environment.

D7 is introduced in several compulsory modules via case studies and the development of business cases, and during the development of the consultancy project proposals. D7 is further developed in the consultancy project, which is individually supervised by academic and business supervisors. This 3 month consultancy project, devised in conjunction with industry partners, and the resulting consultancy report, then allows the student to develop and apply D1-D7 skills to real consultancy problems. For diploma students, D1-D7 are developed during a shorter review project, relevant to the consultancy industry.

Assessment Strategy

Communication skills (D1) are assessed by oral presentations and written reports in a number of modules, including the final consultancy project. Numerical, literature, IT and independent study skills (D2 to D5) are assessed by practical reports, literature reviews and the consultancy final report. Time management skills and independent working (D5) are assessed throughout; in compliance with faculty and school policies for late assessment. Teamwork skills (D6) are assessed by individual reports on group work and by group reports supplemented by *viva voce* assessment of organisation and interpersonal skills. Project management and business skills D7 are assessed by practical and case study reports; summatively assessed via a reflective learning logbook and individual reflective report; and through unseen written examination, written reports and a competitive tender assessment for the consultancy projects. All skills D1-D7 will be comprehensively tested during this final consultancy project.

12 Programme Curriculum, Structure and Features

Basic structure of the programme

The MSc is normally a one year programme, consisting of modules totalling 180 credits, of which 110 credits are in the form of taught modules and 70 credits are from an individual consultancy project. The PgDip totals 120 credits, completed over two semesters, and is made up of 100 credits of taught modules and a smaller (20 credit project).

The taught component of the MSc is composed of 80 credits of compulsory modules and 30 credits of optional modules. The PgDip is similar, but with only 20 credits of options. At registration, a tutor will discuss the choice of optional modules with each of the students. At the discretion of the Degree Programme Director and within timetabling constraints, students may also substitute other modules from throughout the University for the optional modules.

Compulsory taught modules include: critical appraisal of coastal systems; marine environmental research skills; project management; introduction to enterprise and entrepreneurship; coastal governance; and environmental impact assessment. Optional modules include sustainable world aquaculture, fisheries resources assessment and management, habitat mapping and resource assessment using remote sensing, principles and practice of integrated coastal management, coastal flood risk, and renewable energy - policy, politics and ethics. These modules, also supported by industry and government and non-governmental organisations, as well as other academic institutions, involve lectures, practical classes, workshops and a wide range of real-world case studies.

Following the taught component of the programme, MSc students will undertake a 'Marine Consultancy' module (MST8009); this is composed of a series of workshops and a 3 month consultancy project. This provides students with the opportunity to develop a marine consultancy project with a UK/EU or International consultancy, or one of the School's own research groups. Diploma students will select a 20 credit 'Marine Consultancy Review' module, MST8014, in lieu of the consultancy project.

Within these projects, 10 credits lectures and seminars with consultancy partners familiarises students with a variety of marine consultancy and government organisations. Students then choose which organisations they wish to work with, and prepare a project plan/competitive tender document for assessment by potential partners.

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 marine and coastal issues with due consideration given to economic, ecological and social aspects. Significant industry involvement in the programme is also unique in this area, and IMarEst and CIWEM accreditation is sought.

IMEC offers a unique combination of marine environmental science and in-depth taught management, consultancy and enterprise skills, the latter reinforced by hands-on experience during a consultancy project. The programme will build skills needed to work in leading-edge marine consultancies or develop new business ideas for the sector. In-depth case studies of real consultancy projects in the marine environment will be provided in collaboration with our industrial partners. Working in Newcastle or within a partner's business off-campus will give students unique experience of marine consultancy. Supported and supervised by experienced academic researchers and active marine sector consultants, students will through the consultancy project gain valuable experience with prospective employers.

Programme regulations (link to on-line version)

http://www.ncl.ac.uk/regulations/programme/2009-2010/documents/5158GW040609.pdf

http://www.ncl.ac.uk/regulations/programme/2009-2010/documents/3420PgDipGW040509.pdf

13 Criteria for admission

Entry Requirements:
Normally three to six months' relevant practical experience and at least a good second-class Honours degree, or an international equivalent, in an environmental subject. Applicants whose first language is not English require IELTS 6.5, TOEFL 575 (paper-based) or 233 (computer-based), or equivalent.

Entry qualifications

Normally undergraduate honours degree or equivalent in a discipline relevant to the programme (e.g. biology/zoology/botany, marine science, oceanography, environmental science, geography, earth science) at a university recognised by NARIC/International Office

Admissions policy/selection tools

DPD selection: applicants meeting entry qualification and additional requirements can register for MSc,

non-standard entry into Diploma

Non-standard Entry Requirements

Extensive work experience (e.g. 3-6 months relevant to the programme (e.g. marine environmental research, government planning, environmental impact work, work for consultancy, NGO or international agency), entry at Diploma level

Additional Requirements

(1) Normally 3-6 months relevant work experience (duration dependant on qualifications and references), normally with a consultancy/agency/NGO/department/institute/group related to the marine environment (e.g. resource management, environmental monitoring, resource assessment, research, consultancy) or an aspect of it (e.g. mapping, planning, environmental education development) (2) Appropriate rationale for taking programme (e.g. qualification need for professional reasons, intended career in environmental science or consultancy and/or government agencies) (3) Good typically academic reference and possible validation of work experience

Level of English Language capability

Minimum IELTS 6.5 or equivalent

14 Support for Student Learning

Induction

During the first week of the first semester students attend an induction programme. New students will be given a general introduction to University life, the University's principal support services and general information about the School and programme. New and continuing students will be given detailed programme information and the timetable of lectures/practicals/labs/tutorials/etc. The International Office offers an additional induction programme for overseas students (see http://www.ncl.ac.uk/international/arrival/jan/index.phtml)

Study skills support

Students will learn a range of Personal Transferable Skills, including Study Skills, as outlined in the Programme Specification. Students are explicitly taught approaches to both group and individual projects. Numeracy support is available through specific modules and otherwise through Maths Aid. Further details are available at: http://www.ncl.ac.uk/library/news_details.php?news_id=159 Help with academic writing is available from the Writing Centre. Details can be obtained from Alicia.Cresswell@ncl.ac.uk

Academic support

The initial point of contact for a student is with a lecturer or module leader, or their tutor (see below) for more generic issues. Thereafter the Degree Programme Director or Head of School may be consulted. Issues relating to the programme may be raised at the Staff-Student Committee, and/or at the School Postgraduate Board of Studies.

Pastoral support

All students are assigned a personal tutor whose responsibility it is to monitor the academic performance and overall well-being of their tutees. Details of the personal tutor system can be found at http://www.ncl.ac.uk/undergraduate/support/tutor.phtml
In addition the University offers a range of support services, including the Student Advice Centre, the Counselling and Wellbeing team, the Mature Student Support Officer, and a Childcare Support Officer, see http://www.ncl.ac.uk/undergraduate/support/welfare/index.phtml

Support for students with disabilities

The University's Disability Support Service provides help and advice for disabled students at the University - and those thinking of coming to Newcastle. It provides individuals with: advice about the University's facilities, services and the accessibility of campus; details about the technical support available; guidance in study skills and advice on financial support arrangements; a resources room with equipment and software to assist students in their studies. For further details see http://www.ncl.ac.uk/disability-support/

Learning resources

The University's main learning resources are provided by the Robinson and Walton Libraries (for books, journals, online resources), and Information Systems and Services, which supports campus-wide computing facilities, see http://www.ncl.ac.uk/undergraduate/degrees/facilities/index.phtml

All new students whose first language is not English are required to take an English Language Proficiency Test. This is administered by INTO Newcastle University Centre on behalf of Newcastle University. Where appropriate, in-sessional language training can be provided. The INTO Newcastle University Centre houses a range of resources which may be particularly appropriate for those interested in an Erasmus exchange. See http://ncl.ac.uk/langcen/index.htm

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

Module reviews
All modules are subject to review by questionnaires which are considered by the Board of Studies. Changes to, or the introduction of new, modules are considered at the School Teaching and Learning Committee and Board of Studies. Student opinion is sought at the Staff-Student Committee and/or the Board of Studies. New modules and major changes to existing modules are subject to approval by the Faculty Teaching and Learning Committee.

Programme reviews
The School Postgraduate Board of Studies conducts an Annual Monitoring and Review of the degree programme and reports to Faculty Teaching and Learning Committee.

External Examiner reports
External Examiner reports are considered by the School Postgraduate Board of Studies. The Board responds to these reports through Faculty Teaching and Learning Committee. External Examiner reports are shared with institutional student representatives, through the Staff-Student Committee.

Student evaluations
All modules, and the degree programme, are subject to review by student questionnaires. Informal student evaluation is also obtained at the Staff-Student Committee, and the School Postgraduate Board of Studies. The National Student Survey is sent out every year to final-year undergraduate students, and consists of a set of questions seeking the students' views on the quality of the learning and teaching in their HEIs. Further information is at www.thestudentsurvey.com/ With reference to the outcomes of the NSS and institutional student satisfaction surveys actions are taken at all appropriate levels by the institution.

Mechanisms for gaining student feedback
Feedback is channelled via the Staff-Student Committee and the School Postgraduate Board of Studies.

Faculty and University Review Mechanisms
The programme is subject to the University's Internal Subject Review process, see http://www.ncl.ac.uk/aqss/qsh/internal_subject_review/index.php

Accreditation reports
Accreditation is sought from IMarEst and CEIWEM

Additional mechanisms
There is informal discussion throughout the year with teachers, module leaders and the Degree Programme Director and changes can be made in assessment and deadlines in response to student needs.

16 Regulation of assessment

Pass mark
The pass mark is 50 (Postgraduate programmes)

Course requirements
Progression is subject to the University's Masters Degree Progress Regulations, Taught and Research (http://www.ncl.ac.uk/calendar/university.regs/tpmdepr.pdf) and Examination Conventions for Taught Masters Degrees (http://www.ncl.ac.uk/calendar/university.regs/tpmdeprexamconv.pdf). Limited compensation up to 40 credits of the taught element and down to a mark of 40 is possible and there are reassessment opportunities, with certain restrictions.

Weighting of stages
Not applicable

Common Marking Scheme
The University employs a common marking scheme, which is specified in the Taught Postgraduate Examination Conventions, namely:

Summary description applicable to postgraduate Masters programmes

<50	Fail

50-59	Pass
60-69	Pass with Merit
70 or above	Pass with Distinction

Role of the External Examiner
An External Examiner, a distinguished member of the subject community, will be appointed by Faculty Teaching and Learning Committee, after recommendation from the Board of Studies. The External Examiner is expected to:

- See and approve examination papers
- Moderate examination and coursework marking
- Attend the Board of Examiners
- Report to the University on the standards of the programme

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

The University Prospectus (see http://www.ncl.ac.uk/postgraduate/)

The School Brochure (contact enquiries@ncl.ac.uk)

The University Regulations (see http://www.ncl.ac.uk/calendar/university.regs/)

The Degree Programme Handbook and MSc prospectus will be made available and published on the web site at http://www.ncl.ac.uk/marine/postgrad/taught/TBC

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. The accuracy of the information contained is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.

Mapping of Intended Learning Outcomes onto Curriculum/Modules

		Intended Learning Outcomes			
Module	**Type**	**A**	**B**	**C**	**D**
MST8011	Compulsory	3, 5, 6	1, 3, 5, 6	1	1, 3, 4, 5
MST8013	Compulsory	1-3, 5, 6	1, 2	1-3, 5	2-5
MST8010	Compulsory	3, 7, 8, 10	3, 4, 8	3-6	2, 4, 6-7
SPG 8015	Compulsory	6-10	3, 7, 8	4, 5, 6	5, 7
MST8004	Compulsory	1-6	1-5	1, 2, 6	1-6
MST8009	Compulsory	6-8, 10	3, 4, 8	4-6	2, 4, 5-7
BIO8004	Compulsory	1, 3, 5, 6	1, 2, 4, 5	1, 3-5	1-6
MST8103	Optional	1, 2, 5, 6, 9, 10	1, 3, 4, 7, 8	1, 4-6	1, 2, 6, 7
MST8007	Optional	3, 5-6	1-2, 4	1, 3-4	1-5
BIO8000	Optional	2, 5	1-3	1-5	1-5
MST8002	Optional	1-6, 8	1-6	1-6	1-6
CIV8527	Optional	2, 5, 7	1-5	1-5	1-5
SPG8009	Optional	3-5, 8	1, 2, 4	1, 5, 6	1, 3, 5