PROGRAMME SPECIFICATION	

1	**Awarding Institution**	Newcastle University
2	**Teaching Institution**	Newcastle University
3	**Final Award**	BSc Hons.
4	**Programme Title**	Marine Biology
5	**UCAS/Programme Code**	C161
6	**Programme Accreditation**	IMarEST
7	**QAA Subject Benchmark(s)**	Organismal Biology
8	**FHEQ Level**	6
9	**Date written/revised**	October 2007

10 Programme Aims

1. To enable everyone on the degree programme to develop a thorough knowledge and understanding of Marine Biology across the discipline and in the specialist areas of; (i) the biology of marine organisms; (ii) the ecology of marine communities and (iii) the physical and chemical processes occurring in the marine environment, together with appropriate practical and key skills.

2. To be able to appreciate the application of this knowledge and understanding to the management of human activities.

3. To provide a Marine Biology programme for well motivated people from a diversity of social, geographic and academic backgrounds.

4. To provide a Marine Biology curriculum enhanced by an active research environment that will encourage: thinking in a critical and constructive manner, awareness of new technologies and the skills and aptitudes needed for the development of a wide variety of careers within Marine Biology and other areas of graduate employment.

5. To stimulate an informed interest in Marine Biology and engender an awareness of the discipline's interaction with society and the environment.

6. To provide an environment within which everyone can enjoy their learning experience and develop the skills and attitudes to underpin lifelong learning.

11 Learning Outcomes

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 (Marine Biology).

Knowledge and Understanding

On completing the programme students should:

A1 have a coherent understanding of Marine Biology, including a knowledge and understanding of (i) the biology of marine organisms, (ii) the ecology of marine communities and (iii) the physical and chemical processes occurring in the marine environment.

A2 have a coherent understanding of the role of marine biological science in the management of human activities on the marine environment.

A3 understand current developments in Marine Biology and appreciate the possible implications

Teaching and Learning Methods

Knowledge and understanding (A1 – A3) are principally imparted through lectures and seminars. Seminars and advanced lecture courses in Stage 3 are particularly important in delivering A3 as they provide the opportunity for exposure to knowledge at the 'cutting edge' of advancement in the field. Throughout the course students are directed to appropriate reading materials. The tutorial system and study skills classes provide support and guidance in the use of literature and the diversity of sources available. A number of 'self-study' packs, backed by tutorial support and seminars, are used to develop IT and statistical expertise.

Assessment Strategy

Knowledge and understanding of the subject are primarily assessed through unseen written examinations. These include, in Stage 1, MCQ tests to examine the breadth of factual knowledge. Assessed essays/library projects are used to determine the ability to apply knowledge and integrate material. Formative feedback is provided throughout the course to allow students to assess and develop their learning skills.

Intellectual Skills

On completing the programme students should be able to:

B1 demonstrate academic rigour and the ability to propose, test and challenge hypotheses

Teaching and Learning Methods

Extensive use of structured independent practical/field exercises begins the students' training in research methodologies which culminates in the honours research project. Tutorials, seminars and workshops that cover research methodologies and the 'scientific method' accompany these.

Assessment Strategy

Practical Skills

On completing the programme students should be able to:

C1 demonstrate competence in the practical and field skills which are an essential attribute of a marine biologist

Teaching and Learning Methods

Practical, field and research skills are developed in laboratory and field classes. Students are encouraged to develop and hone their practical skills through tutorial support and supervisor contacts in practical classes and project work. Independent and group project based exercises further reinforce these lessons and allow self-evaluation and critique.

Assessment Strategy

Transferable/Key Skills

On completing the programme students should be able to:

D1 be aware of their responsibility to society and the environment, including their potential influence in society

D2 demonstrate that they are motivated people, able to build on the learning experiences of the degree programme and the range of learning experiences and initial qualifications they had on entry

D3 be capable of obtaining and developing careers in a wide range of work environments.

Teaching and Learning Methods

Awareness of the role of marine science in society is developed through exposure to practitioners and case studies in seminars and from visiting lecturers. These are an integral

part of many advanced (Stage 3) modules. Students take part in a variety of problem solving activities, including design of projects, role play exercises and planning overseas travel. These are undertaken as both group (team) and independent activities. Exposure to the diversity of material in the programme and the range of external experiences reinforces the motivation of the students and prepares them for a wide variety of possible roles on graduation. This is supported by targeted presentations from the University Careers Service.

Assessment Strategy

D1 is assessed by unseen written examination in that the MST3011 General Paper in Marine Biology includes broad ranging questions that cover the societal role and application of marine science.
The other skills are not assessed.

12 Programme Curriculum, Structure and Features

Basic structure of the programme

(a) Duration three years.
(b) Comprises three stages.
(c) A total of 360 credits, 120 Stage 1, 120 Stage 2, 120 Stage 3
(d) Module credit values vary between 10 and 40. 10 credits represents 100 hours of student activity and 40 credits 400 hours of student activity.
(e) Progression: Pass in 120 credits, including all core modules is required in Stages 1 and 2. Non-core modules which are failed with a mark of >35 can be compensated if the overall mark is >40. The Board of Examiners may recommend a pass at a lower mark if circumstances warrant.

(f) Innovative features of the degree include the amount and integration of field studies into the programme, the marine biology overseas exercise and the use of external practitioners and case studies to inform Stage 3 teaching. Students undertake 2 weeks of field courses and 6 other modules include field practical classes.

(ii) **Stage One**

Stage One provides an introduction to core subjects in Marine Biology supported by

a balanced programme of modules designed to provide the sound scientific background required for the later stages of the degree programme.

Three core modules are defined: **Biodiversity of Marine Animals (MST1001) Oceanography and Marine Ecology (MST1002)** and **Field and Laboratory Techniques in Marine Biology (MSM 1003)**. The last of these covers the wide variety of ways scientists measure and record the marine environment and how that information is used. All candidates for the Honours degree in Marine Biology must demonstrate a high level of proficiency and knowledge of these subjects. A further 60 credits worth of modules will be selected to the approval of the Degree Programme Director. The selection of modules is made in consultation with the students' tutor who will advise the candidate, bearing in mind their previous learning and background.

The three CORE modules at Stage One introduce the student to key areas of the syllabus and provide an introduction to practical study through the use of field and laboratory classes. Independent field study with appropriate study guides, video and other methods of learning will also be used to provide the candidate with a rich and diverse background to their learning of marine biology and to ensure that the student has the developed the skills needed. The courses provide both an overview and an introduction to the subject and the modules are suitable for those proceeding to other scientific disciplines. **The student must pass these core modules**.

At Stage One students will begin to learn how to supplement the formal taught components of the course with private study and Marine Biology candidates will be assigned personal tutors. They will guide them in the process, as well as providing a

small group study environment where the student will be encouraged to practice both study and communication skills prior to proceeding to those modules at Stages 2 and 3 where these skills will be formally assessed.

On completing the Stage One programme the student:

- *will be eager to learn more about marine biology,*
- *should have a sound knowledge of marine biology at an introductory level,*
- *understand the basis for the study of marine biology through both biological and physical sciences.*

Stage Two

On completion of Stage One every student, whatever their cultural or academic background, will have achieved an enhanced basis for more advanced study of the subject at Stage Two of the Honours Marine Biology programme which builds on the platform created by the first year of study. A number of compulsory subjects are studied at greater depth and new subjects in Marine Biology are introduced. The modules include both pure and applied aspects of Marine Biology as well as a continuation of basic scientific and information skill related modules.

Special features of the course are Modules providing more detailed coverage of experimental biology, marine ecology, oceanography, experimental marine biology and ecophysiology that lead into the advanced modules to be studied in Stage Three of the degree programme.

Considerable emphasis is given to the learning of field and laboratory practical techniques. The course therefore includes field study modules, data analysis, statistics and other numerical methods.

There are modules encouraging learning of the theoretical basis of marine biology for which the student will have to study a variety of sources of information. The candidate will also study modules which will enhance related practical skills. These modular elements are designed to develop the student's skills in information technology, data and information source handling, writing and oral presentation. All of which it is hoped that the candidates will enjoy using in the Stage 3 programme and will enable them to proceed to a wide variety of career tracks.

Stage 3 will begin with the Module MST3011 Core Skills in Marine Biology important components of which will be completed during the second summer vacation. The student should find out about this in good time and plan for during Stage 2.

At the end of the Second Stage of the degree programme the student:

- *will have gained a sound knowledge of the biology of marine organisms, the physical and chemical processes in the marine environment,*
- *should have knowledge of experimental study of the physiology, development and regulatory processes of marine organisms,*
- *be able to locate and review literature using both library based and electronic information retrieval systems.*
- *will have developed a variety of practical and field skills appropriate for a marine biologist,*
- *be in a position to plan and carry out an independent scientific investigation using*

either field or laboratory techniques,

- *should be capable of independent study including the ability to present a review of their own work or that of others in relation to published sources of literature.*

Building on these skills will be a major part of the programme of study at Stage 3.

Stage Three

Stage Three of the degree programme has been designed to provide both broad coverage of the subject and to provide opportunities for specialisation and study in depth. The whole programme builds on the diverse learning outcomes achieved in the previous two Stages of the degree programme.

Prior to the first Semester the student will undertake a variety of studies in the Module MST3011 – Core Skills in Marine Biology which explicitly develops a number of those skills further. The candidate will for instance, undertake a period of endeavour away from the University as an investigative scientific journalist and will be encouraged to show initiative in seeking a suitable location for this, possibly overseas. Students will be given training in sea survival techniques and safety issues and will undertake an independent scientific investigation on a field course that has traditionally been held at the Isle of Cumbrae to provide them with experience of more diverse marine environments.

In the first semester 10 credit advanced modules are introduced which present a subject in the context of the current research literature. The student will select to study three of these. Such courses are inevitably specialised and deliberately reflect the research expertise of the School.

In the second semester students will select for special study two larger 25 credit integrated Advanced Modules which are designed to bring them an understanding of the thresholds of current research in Marine Sciences and how that knowledge is of benefit to Society. These will present conceptual ideas and provide the basis for in depth private study and will often involve interaction with professional marine biologists invited to participate in the programme.

The advanced modules at Stage 3 will continue using a small group approach. At this stage the student will be trained in procedures for study on a research vessel and associated safety measures. Numerical skills may lead into module components involving mathematical modelling and computer simulation in the analysis of marine biological and oceanographical problems.

This broad range of advanced course modules forms the background to the student's own independent studies.

A major component of the course that integrates much of the proceeding training is the **RESEARCH PROJECT**. This takes the form of an independent scientific investigation carried out the supervision of a member of the School and presented as a written dissertation (40 credits) and an oral presentation which students give to class and members of the School. The oral component will be assessed but the student will have already gained experience at earlier stages of the degree programme and can expect to have achieved a high level of technical and professional competence by this stage of the degree programme.

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

Programme regulations (link to on-line version)

http://www.ncl.ac.uk/regulations/programme/2009-2010/documents/C161MarineBiologyMarch2009GW021009.pdf

13 Criteria for admission

Entry qualifications

GCSE Mathematics (minimum grade C) required.

A-Level Subjects and Grades
BBC/BCC from 18 units in 6- or 12-unit qualifications and normally including A level Biology. Chemistry preferred at AS level if not offered at A level but not essential

Alternative entry qualifications

World-wide qualifications equivalent to 'A' levels accepted

Admissions policy/selection tools

To admit candidates from a wide range of backgrounds and ages, from any country in the world, who are well qualified for the degree course.

Non-standard Entry Requirements
All non-standard applicants are invited for an informal discussion with the Admissions Tutor and Degree Director to ensure that they have the background which will adequately prepare them for the degree course.

PARTNERS scheme
The Marine Biology programme is involved in the Newcastle PARTNERS programme.
The PARTNERS Programme is intended to support students who definitely wish to study at Newcastle University.
The PARTNERS offer requires students to

- successfully complete the Assessed Summer School
- achieve specific grades in their A/As levels/AVCE/National Diploma course

These grades will be slightly lower than the normal offer for the Marine Biology degree programme to take account of the extra work they do for the Assessed Summer School. The PARTNERS offer for this degree is CDD.

Additional Requirements

Level of English Language capability

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 and the University's principle support services and general information about the School and their programme, as described in the Degree Programme Handbook. 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. Some of this material, e.g. time management is covered in the appropriate Induction Programme. Students are explicitly tutored on their approach to both group and individual projects.

Numeracy support is available 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 Board of Studies.

Pastoral support
All students are assigned a personal tutor whose responsibility 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 at the 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 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 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 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 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

Additional mechanisms

16 Regulation of assessment

Pass mark
The pass mark is 40 (Undergraduate programmes)
The pass mark is 50 (Postgraduate programmes)

Course requirements
Progression is subject to the University's Undergraduate Progress Regulations (http://www.ncl.ac.uk/calendar/university.regs/ugcont.pdf) and Undergraduate Examination Conventions (http://www.ncl.ac.uk/calendar/university.regs/ugexamconv.pdf). In summary, students must pass, or be deemed to have passed, 120 credits at each Stage. Limited compensation up to 40 credits and down to a mark of 35 is possible at each Stage and there are resit opportunities, with certain restrictions.

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
The marks from Stages ??? will contribute to the final classification of the degree
The weighting of marks contributing to the degree for Stages ??? is ?:?

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

	Modules used for degree classification (DC)	**Modules not used for degree classification**

<40	Fail	Failing
40-49	Third Class	Basic
50-59	Second Class, Second Division	Good
60-69	Second Class, First Division	Very Good
70+	First Class	Excellent

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

Summary description applicable to postgraduate Masters programmes		**Summary description applicable to postgraduate Certificate and Diploma programmes**	
<50	Fail	<50	Fail
50-59	Pass	50 or above	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, is 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/undergraduate/)

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

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

The Degree Programme Handbook

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.

11 ii

Module	Credit	Status	Intended Learning Outcomes							
			A1	A2	A3	B1	C1	D1	D2	D3
Stage 1										
MST1001	20	Core	✓							
MST1002	20	Core	✓		✓					
MST1003	20	Core	✓	✓		✓			✓	
MST1004	10	Cp		✓	✓		✓	✓		
MST1005	10	Cp								
MST1008	10	Op	✓		✓					
MST1009	10	Op	✓		✓					
BIO1001	10	Op								
BIO1002	10	Op								
ACE1013	10	Cp	✓							
MAS1401	10	Cp				✓	✓			
Stage 2										
BIO2010	10									
NCL2001	10									✓
NCL2002	10									✓
MST2001	10		✓	✓	✓					
MST2002	10		✓	✓	✓					
MST2005	10		✓							
MST2004	10		✓	✓						
MST2006	20	Core	✓	✓		✓		✓	✓	
MST2009	10	Cp	✓	✓	✓					
MST2010	10									
MST2011	20	Core			✓	✓	✓		✓	
MST2012	10		✓							

Stage 3										
MST3001	10		✓							
MST3002	10		✓	✓						
MST3003	10		✓							
MST3010	40		✓	✓		✓	✓	✓	✓	✓
MST3011	20				✓	✓			✓	
MST3099	40		✓		✓	✓	✓		✓	✓

Annex

Mapping of Intended Learning Outcomes onto Curriculum/Modules

Either

Intended Learning Outcome	Module codes (Compulsory in Bold)
A1	**ABC1001**, XYZ2002
A2	
A3	
A4	
B1	
B2	
B3	
B4	
C1	
C2	
C3	
C4	
D1	
D2	
D3	
D4	

Or

		Intended Learning Outcomes			
Module	**Type**	**A**	**B**	**C**	**D**
XYZ1001	Compulsory	1	1, 2, 3	4	2, 3