PROGRAMME SPECIFICATION	

1	**Awarding Institution**	Newcastle University
2	**Teaching Institution**	Newcastle University
3	**Final Award**	Master of Science
4	**Programme Title**	Marine Technology (International)
5	**UCAS/Programme Code**	5115
6	**Programme Accreditation**	Ministry of Education, Singapore Royal Institution of Naval Architects Institute of Marine Engineering, Science and Technology
7	**QAA Subject Benchmark(s)**	n/a
8	**FHEQ Level**	7
9	**Date written/revised**	February 2007

10 Programme Aims

The aim of this programme is to provide a high quality postgraduate programme in the subject of Marine Technology for Singapore and the Asian region. The programme has been specifically designed to meet the needs of the Asian maritime market so that graduates have the necessary skills in advanced marine technologies for future development and improved efficiency in the industry.

The programme aims to provide the marine industry in the region with a Masters Training Package which will enable graduates working in industry to gain the necessary skills training in advanced technologies, management, business and IT. The training will be relevant to current problems and functions of the marine sector and will be designed to enhance the industry's knowledge base and improve competitiveness. This will provide students with enhanced technical and managerial techniques that can be applied in the marine industry and enable them to take on major responsibilities early in their careers.

The programme aims to be financially sustainable and at the same time aims to increase the profile of Newcastle University within Singapore and the Asian region. The programme also aims to "roll out" to other potentially significant markets such as China.

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.

Knowledge and Understanding

On completing the programme students should be able to demonstrate an understanding of:

A1 advanced technologies and technological developments within marine technology with particular reference to the Singaporean and Asian maritime industry

A2 business applications of advanced marine technologies

A3 concepts of non-technical issues including economics, environmental issues, safety and legislation associated with marine technology

A4 project management systems and approaches

Teaching and Learning Methods

Knowledge and understanding is generally taught via formal lectures and distance learning material, supplemented by seminars and tutorials. Students are encouraged to develop their knowledge and understanding by independent reading for which they are given guidance in the distance learning material. The use of design exercises during the intensive school, and work based assessments and application after the intensive school, also enable the student to learn. Students will also develop all these skills through their project (MSc and PG Diploma students) which will require all skills to be demonstrated. Student meetings with academic staff will give students the opportunity to discuss issues and develop these skills.

Assessment Strategy

Knowledge and understanding is assessed via unseen written examinations, course assignments and the final project dissertation. For A1 and A2 this is supplemented by performance in design exercises where appropriate.

Intellectual Skills

On completing the programme students should be able to demonstrate an awareness of:

B1 the collation, analysis and evaluation of data
B2 problem formation and problem solving
B3 decision making ability in both theoretical and practical situations

Teaching and Learning Methods

These skills are taught primarily through design classes, case studies and seminars. Development of these skills is particularly linked to industrial and work based application such as group and individual design exercises and work based, postschool assignments. All projects will also require the use and development of all of these skills.

Assessment Strategy

Intellectual skills are assessed by postschool assignments and unseen written examinations. These skills will also be closely assessed in the project dissertation as this will require students to clearly demonstrate problem identification and solving capability.

Practical Skills

On completing the programme students should be able to demonstrate:

C1 an awareness of theoretical design concepts and practical implementation
C2 competence in a number of software programmes used in the maritime industry
C3 project planning, project management and resource management skills with particular expertise in techniques and issues relevant to the maritime industry

Teaching and Learning Methods

Practical skills are highly relevant in this programme. Lectures and design exercises are a key element to teaching subject specific skills. In addition, distance learning material is used to develop an understanding of theoretical design concepts, project planning and project and resource management theory and skills.

Students are encouraged to learn by application, both during the module and in a work based environment. Design exercises during the modules and work based application as part of the postschool study are the key methods for enabling the students to obtain and improve these important skills. In particular, design exercises require the student to apply theoretical work in a practical way, use a variety of software and organise and manage the design process. In addition, skill C2 is supplemented by the delivery system for the distance learning material which is a web based system (Blackboard). Skill C3 is also development through the actual participation in the programme which requires students to plan their studies and project in conjunction with full time employment.

Undertaking a project and preparing a dissertation will also require students (MSc and PG Diploma) to develop their skills in this area. It is likely that many projects will include both C1 and C2. In addition the management of the project programme, contribution of others and timely delivery will require students to develop C3.

Assessment Strategy

These skills are essentially assessed via design exercises (where appropriate) and course assignments. Theoretical design concepts and practical implementation (C1) are also assessed via the unseen written examination. All skills will also be assessed via the project dissertation.

Transferable/Key Skills

On completing the programme students should be able to demonstrate:

D1 communication skills, for both technology based and non-technology based communication

D2 time management skills including meeting deadlines

D3 understanding of the importance of team work and how to develop and manage a successful team work capability

D4 the ability to work alone

Teaching and Learning Methods

Key transferable skills are demonstrated in seminars and through the study skills information in the student handbook. This information is particularly important for the distance learning element of the programme. Expertise in these skills is developed by module presentation, where applicable (D1), design exercises (D3), and work based assignments (D1, D2, D4). The actual completion of the programme, including the distance learning pack, will, in itself, significantly develop key skills (D2, D4). The student must combine this study with commitments at work and at home. In addition, all these key skills will be essential for the successful completion of the project (MSc and PG Diploma students), and will be developed through guidance from academic staff as well as practical implementation.

Assessment Strategy

Communication skills (D1) are the most assessed key skills. Assessment includes design exercises and course assignments. Team working (D3) is also assessed by any group design exercises. The other skills are not formally assessed in the programme, although their implementation is essential for a student to successfully complete the taught element of the programme and the project.

12 Programme Curriculum, Structure and Features

Basic structure of the programme

The programme will be delivered as a part time modular programme. The minimum duration of the programme is two years, and the maximum duration is three years. MSc students complete ten 10-credit modules and an 80-credit research project. PG Diploma students complete eight 10-credit modules and a 40-credit research project. PG Certificate students complete six 10-credit modules. There are no optional modules for MSc students.
Overall credit arrangements:
MSc 180 credits
PG Diploma 120 credits
PG Certificate 60 credits

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

The programme is delivered entirely in Singapore and enables graduates working in the marine industry to obtain an accredited MSc whilst remaining in fulltime employment.

Programme regulations (link to on-line version)

http://www.ncl.ac.uk/regulations/programme/2007-2008/programme/5115.php

13 Criteria for admission

Entry qualifications
BEng Honours in a marine technology subject or relevant engineering subject (e.g. civil, mechanical or environmental engineering). Class 2.2 or above.

Admissions policy/selection tools
All applicants will be considered on the basis of their academic qualifications and their relevant technical industrial experience. All admissions will be undertaken in accordance with the equal opportunities policy set out in the degree programme handbook.

Non-standard Entry Requirements
Students with non standard entry qualifications will be considered on a case by case basis. Key criteria will be academic qualifications (equivalent to 2.2 Honours degree), technical experience, level of responsibility and leadership.

Applicants who do not meet the standard entry qualification will be asked to submit a CV detailing academic qualifications and industrial experience. This will be reviewed by the Programme Director on a case by case basis. Those not meeting entry standard levels may be advised on how the appropriate standard required can be achieved. The candidate will be advised of the outcome in writing.

Additional Requirements

Level of English Language capability
An applicant whose first language is not English will be required to satisfy the Programme Director of an ability to understand and communicate, in both written and spoken English, which is adequate for the purpose of pursuing the course of study. Either before or after the application for admission to the programme, the Programme Director may require the applicant to attend a programme of instruction and reach a satisfactory standard in the English language. The minimum English language proficiency requirement is IELTS 6.5 (or equivalent).

14 Support for Student Learning

Induction
Induction will be primarily via the local partner organisation (VKMCS) who will undertake an induction session for each student. Additional induction will be via the degree programme handbook and the Blackboard system. A programme administrator can be contacted by telephone, fax or email.

Study skills support
Study skills support will be offered via VKMCS and the degree programme handbook. The Blackboard system will provide study skills information and support via the forum boards system. Support will be available from the programme administrator and the academic staff. This support will be via email or face to face meetings with academic staff when they visit Singapore.

Academic support
The degree programme handbook provides contact details of each module leader. Further academic support can be obtained during the intensive school when the students have the opportunity to meet the academic staff involved. The discussion boards on the Blackboard system also offer academic and peer support to the student.

Pastoral support
Pastoral support will be available via VKMCS, the programme administrator and the Programme Director.

Support for students with disabilities
VKMCS, the programme administrator and academic staff involved in the programme will endeavour to ensure that support for students with special needs is provided as far as is possible.

Learning resources
The following learning resources will be made available to each student:
Web based Blackboard system
Key reference text book for each module, to be supplied by the programme
Distance learning material

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.

Student evaluations
Student evaluations will be sought after each module and as a general "programme review" on a regular basis. Student evaluations are considered at the Board of Studies.

Mechanisms for gaining student feedback
Feedback is channelled via 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

Ministry of Education (Singapore), IMarEST and RINA.

16 Regulation of assessment

Pass mark
Pass mark for modules and industrial projects is 50%.

Course requirements
A student must pass all the modules and the industrial project in order to be eligible for a postgraduate award. One resit of each module is permitted and students can continue taking modules whilst waiting for the opportunity to resit.

Weighting of stages
The programme has no stages.

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.

Annex

Mapping of Intended Learning Outcomes onto Curriculum/Modules

		Intended Learning Outcomes			
Module	**Type**	**A**	**B**	**C**	**D**
MAR8102	Comp	2, 3, 4	1, 2, 3	2, 3	1, 2, 3, 4
MAR8109	Comp	3	1, 2, 3	3	1, 2, 3
MAR8104	Comp	1	1, 2, 3	1, 2, 3	1
MAR8101	Comp	1, 2, 3	1, 2, 3	1, 2, 3	1
MAR8103	Comp	1, 2, 3	1, 2, 3	1, 2, 3	1
MAR8127	Comp	1, 2, 3	1, 2, 3	1, 2, 3	1
MAR8120	Comp	1, 2, 3	1, 2, 3	2, 3	1, 2, 3, 4
MAR8128	Comp	1, 2, 3	1, 2, 3	1, 2, 3	1
MAR8129	Comp	1, 2, 3	2, 3	2, 3	1, 2, 3, 4
MAR8126	Comp	3	1, 2, 3	3	1, 2, 3, 4
MAR8196	Comp	1, 2, 3, 4	1, 2, 3	2, 3	1, 2, 3, 4
MAR8195	Comp	1, 2, 3, 4	1, 2, 3	2, 3	1, 2, 3, 4