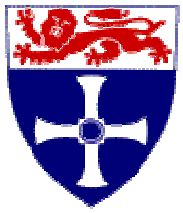
UNIVERSITY OF
NEWCASTLE UPON TYNE

FACULTY OF
SCIENCE, AGRICULTURE & ENGINEERING

DEGREE PROGRAMME SPECIFICATION

UNIVERSITY OF NEWCASTLE



1.	**Awarding Institution**	University of Newcastle upon Tyne
2.	**Teaching Institution**	University of Newcastle upon Tyne
3.	**Final Award**	B.Eng (Hons)
4.	**Programme Title**	Marine Technology with Honours in: Naval Architecture (code H510); Marine Engineering (codes H351, H350) Offshore Engineering (code HJ36) Small Craft Technology (code H520)
5.	**Programme Accredited by:**	RINA, IMarEST
6.	**UCAS Code**	As shown in 5 above, the first code number is for the 4 year course with Foundation year, the second is for the 3 year course.
7.	**QAA Benchmarking Group(s)**	Engineering
8.	**Date of production/revision**	June 2002/October 2004

9. Programme Aims:

The programme aims:

- To produce graduates who have developed well founded knowledge skills and understanding within one or more specific subject areas of Marine Technology,
- To couple a sound theoretical grasp of the subject with practical application, awareness of responsibilities to society and the environment, the requirement for flexibility and the ability to assemble information from a variety of sources; the ability to prioritise work and meet deadlines; the ability to work alone and also within teams
- To prepare a student for one of four well recognised sectors of the marine industries worldwide, namely Marine Engineering, Naval Architecture, Offshore Engineering and Small Craft Technology,
- To provide a programme which meets the FHEQ at Honours level and which takes appropriate account of the subject benchmark statements in Engineering (E) document as referenced in (http://www.qaa.ac.uk/crntwork/benchmark/engineering.pdf)

10. Intended Learning Outcomes; Teaching and Learning Strategies and Methods; Assessment Strategies and Methods

To meet the aims outlined above, the degree programmes all have the following objectives:

i. To equip students having diverse backgrounds with knowledge skills and understanding in their chosen programme.

ii. To ensure students receive the core material recommended by the accrediting professional institutions (the Institute of Marine Engineers and the Royal Institution of Naval Architects).

iii. To enable students to enhance their projects by facilitating the School's exceptional research base to inform teaching and lecturing activities.

iv. To equip students with appropriate transferable practical skills in computing and information technology, data collection and analysis, problem formulation and solving and communication skills, both oral and written.

v. To encourage students to develop awareness and responsible attitudes towards the needs of society and the environment in the application of their engineering knowledge, including a regard for safety appropriate to their profession.

vi. To have a repertoire of skills to enable the acquisition, evaluation and interpretation of information

vii. To have the ability to communicate effectively, make presentations, work as a member of a team, manage their time, prioritise and manage their work effectively

viii. To instil in students an awareness of their professional responsibilities and the need for their own continuing professional development.

ix. To contribute to the working environment within the School, such that students enjoy the University learning experience and wish to maintain contact with the School in its future activities, professionally as well as socially.

A Knowledge and understanding

A successful student will have gained and be able to demonstrate:

A1. Basic Mathematics and Physics that are relevant to Marine Technology (E);

A2. The fundamental concepts, principles and theories of Marine Technology (E);

A3. Business and management techniques that are relevant to marine technology and marine technologists (E);

A4. Detailed knowledge and understanding of the essential facts, concepts, principles and theories relevant to the student's chosen area of specialisation within Marine Technology (E);

A5. The role of marine technologists in society and the constraints within which their engineering judgement will be exercised (E);

A6. The professional and ethical responsibilities of marine technologists (E);

A7. The environmental issues that affect Marine Technology and the issues associated with sustainable engineering solutions;

A8. Conceptual and detailed design of artefacts appropriate to their area of specialisation;

A9. Production practice including codes of practice, design, the assessment of safety risks, and the

legislative framework for safety.

Teaching/learning methods and strategies

Acquisition of 1 and 2 is through a combination of lectures, tutorials, example classes, laboratory experiments, coursework and projects in Stages 1 and 2.

Acquisition of 3 is through a combination of lectures, supervisions, coursework and projects in Stages 3.

Acquisition of 4 is through a combination of lectures, laboratory experiments, coursework and projects in Stages 3.

Acquisition of 5 and 6 is through lectures throughout the programme and coursework in Stage 3.

Acquisition of 7 is through a combination of lectures, seminars, coursework and projects especially in Stages 3.

Acquisition of 8 is through the design project in Stages 3 and lectures and coursework in Stages 2 and 3.

Acquisition of 9 is addressed in lectures associated with Stages 2 and 3 modules.

Assessment strategy

Testing the knowledge base is through a combination of unseen written examinations (1-4, 9) and assessed coursework (1-9) in the form of laboratory experiment write-ups (1, 2, 4), examinations (8), coursework reports (3-9) and project reports and presentations (2, 3, 4, 7,8).

B Subject –specific/professional skills

A successful student will be able to:

B1. Plan, conduct and report a programme of investigative work;

B2. Analyse and solve engineering problems (E);

B3. Design a structure or component to meet a need (E);

B4. Be creative in the solution of problems and in the development of designs (E);

B5. Evaluate designs and make improvements (E);

B6. Integrate and evaluate information and data from a variety of sources (E);

B7. Take an holistic approach to solving problems and designing systems, applying professional judgements to balance risks, costs, benefits, safety, reliability, aesthetics and environmental impact (E).

Teaching/learning methods and strategies

Skills B1 and B2 are developed during laboratory experiments, coursework and projects as well as through lectures, tutorials, example classes, laboratory experiments, coursework and projects associated with Stage 2 and Stage 3 modules.

Skills B3, B4 and B5 are developed through engineering applications and marine engineering design as well as research project and dissertation modules which students study during Stage 2 and Stage 3.

Skill B6 are developed through coursework activities, laboratory experiments, and research and design

projects as well as through tutorials, example classes, laboratory experiments, coursework and projects associated with Stage 2 and Stage 3 modules.

Skill B7 are developed through design and project work carried out during Stage 3.

Assessment strategy

Analysis and problem solving skills are assessed through unseen written examinations and coursework.
Experimental, research and design skills are assessed through laboratory experiment write-ups, coursework reports and project reports, presentations and unseen written examinations.
Creative and design skills are assessed through coursework and unseen written examinations.

C Cognitive skills

A successful student will be able to:

C1. Execute safely a series of experiments (E);

C2. Use laboratory equipment to generate data (E);

C3. Analyse experimental or computational results and determine their strength and validity(E);

C4. Prepare technical drawings;

C5. Prepare technical reports;

C6. Give technical presentations;

C7. Use the scientific literature effectively;

C8. Take notes effectively;

C9. Use computational tools and packages (E);

C10. Produce a conceptual or elemental design to a specification;

C11. Search for information to develop concepts.

Teaching/learning methods and strategies

Practical skills are developed through the teaching and learning programme outlined above (and in section 11).
Practical experimental skills (1-3) are developed through laboratory experiments and project work.
Skill 4 is taught through lectures and developed through drawing coursework exercises.

Skills 5 and 6 are taught through classes in Stage 1 and then developed through feedback on reports written and presentations made as part of coursework assignments.

Skill 7 is developed through research project work.

Skill 8 is taught in Stage 1 and practised throughout the programme.

Skill 9 is taught and developed through coursework exercises and project work.

Skill 10 is taught and developed through the design project in Stages 3 and lectures and coursework in Stages 2 and 3.

Skill 11 is practised the through design project.

Assessment strategy

Practical skills are assessed through laboratory experiment write-ups, coursework reports, project reports and presentations

D Key (transferable) skills

A successful student will be able to:

D1. Communicate effectively (in writing, verbally and through drawings) (E);

D2. Apply mathematical skills (algebra, geometry, modelling, analysis);

D3. Work as a member of a team (E);

D4. Use Information and Communications Technology (E);

D5. Manage resources and time (E);

D6. Learn independently in familiar and unfamiliar situations with open-mindedness and in the spirit of critical enquiry (E);

D7. Learn effectively for the purpose of continuing professional development and in a wider context throughout their career (E).

Teaching/learning methods and strategies

Transferable skills are developed through the teaching and learning programme outlined above (and in section 11).

Skill 1 is taught through classes and the design project in Stage 3 and then developed through feedback on reports written and presentations made as part of coursework assignments.

Skill 2 is taught through lectures and tutorials and developed throughout the course.

Skill 3 is developed through group project work.

Skill 4 is developed in many modules and is a skill developed as essential part of project work and report writing.

Skill 5 is developed through laboratory experiments, projects and other coursework activities and individual learning.

Skill 6 is introduced in Stage 1 and developed throughout the course with particular emphasis in Stage 3 on the investigative project.

Skill 7 is developed through lectures and tutorials and developed throughout the course.

Assessment strategy

Skill 1 is assessed through coursework reports, presentations and oral examinations.
Skill 2 is assessed primarily through examinations.
Skill 4 is assessed through examinations and through research project work.
The other skills are not formally assessed.

11 Programme Features, Structure and Curriculum

A Programme Features

The normal Undergraduate year is approximately 31 weeks, arranged in three terms and currently divided into two Semesters. The course normally lasts three years, although it is possible to take a gap year or spend time abroad at an approved university.
Every Honours student studies 120 credits in each Stage (or year), resulting in B.Eng. candidates completing 360 credits. Candidates must complete one Stage before proceeding to the next; the only part-time study is limited provision for the repetition of failed modules.
All students follow the same programmes in Stages 1. In the second year, students elect to follow a specialisation within Marine Technology. This is enhanced and extended in Stage 3. It is possible for a student to continue the programme for 4 years to obtain an M.Eng. Honours degree by transferring to this programme at the end of Stage 2. There is a Faculty Foundation Year for candidates not adequately qualified to embark on Stage 1 of Degree Programmes.

B Programme Structure

The programme is structured on a semester pattern. You study modules comprising 120 credits in each of Stage I, II and III . After successful completion of three years full-time study, students will receive a degree of Bachelor of Engineering (BEng).
In addition there are the following exit points:

- Certificate of Higher education, following successful completion of Stage I ;
- Diploma of Higher education, following successful completion of Stage II ;

The duration of all the courses may be extended by one year through enrolment on the Engineering Foundation Year.
A University credit is the equivalent of 10 student study notional hours. Each module is a self-contained part of the programme of study and carries a credit rating.

C Programme Curriculum

Stage 1
All candidates shall take the following compulsory modules:

Code	*Credits*	*Descriptive title*
MAR101	(20)	Marine Engineering I
MAR103	(20)	Naval Architecture I
MAR104	(5)	Introduction to Computing
MAR105	(5)	Marine Statistics
EEE136	(10)	Electrical Engineering I
ENM105	(20)	Engineering Mathematics I
MMM114	(10)	Materials Science I
MMM118	(5)	Introduction to Machine Design
MMM151/ MMM124	(15)	Mechanics I
MMM152/ MMM155	(10)	Manufacturing Technology & Management I

Stage 2

All candidates shall take the following compulsory modules:

Code	*Credits*	*Descriptive title*
MAR205	(10)	Marine Production Technology I
MAR212	(10)	Engineering Applications
MAR214	(10)	Analytical Methods in MarineTechnology
CSC631	(10)	Introduction to Programming and Software Engineering in Java
ENG201	(10)	Introduction to Business Management

All candidates shall take further compulsory modules to the value of 70 credits chosen according to Honours degree programme as follows:

Marine Engineering

Code	*Credits*	*Descriptive title*
MAR202	(10)	Marine Engineering IIA
MAR203	(10)	Marine Engineering IIB
MAR206	(10)	Marine Structures IA
MAR213	(10)	Powering of Marine Vehicles
EEE235	(10)	Electrical Engineering II
MMM211	(10)	Materials Science II
MMM251	(10)	Dynamics and Control II

Naval Architecture

Code	*Credits*	*Descriptive title*
MAR201	(10)	Marine Dynamics
MAR202	(10)	Marine Engineering IIA
MAR206	(10)	Marine Structures IA
MAR207	(10)	Marine Structures IB
MAR208	(10)	Naval Architecture II
MAR210	(20)	Resistance and Propulsion I

Offshore Engineering

Code	*Credits*	*Descriptive title*
MAR201	(10)	Marine Dynamics
MAR203	(10)	Marine Engineering IIB
MAR206	(10)	Marine Structures IA
MAR207	(10)	Marine Structures IB
MAR209	(10)	Offshore Mechanics
MAR213	(10)	Powering of Marine Vehicles
CIV221	(10)	Soil Mechanics

Small Craft Technology

Code	*Credits*	*Descriptive title*
MAR201	(10)	Marine Dynamics
MAR206	(10)	Marine Structures IA
MAR207	(10)	Marine Structures IB
MAR208	(10)	Naval Architecture II
MAR210	(20)	Resistance and Propulsion I
MAR211	(10)	Small Craft Science

Stage 3
All candidates shall take modules to a total value of 120 credits according to Honours degree programme as follows:

Marine Engineering
Compulsory modules with a total value of 90 credits:

Code	*Credits*	*Descriptive Title*
MAR301	(20)	Marine Engineering Design
MAR312	(10)	Dynamic Modelling and Simulation
MAR313	(10)	Internal Combustion Engines
MAR316	(10)	Marine Engineering III
MAR330	(5)	Stability of Marine Vehicles
MAR331	(5)	Naval Architecture III
MAR398	(30)	Project and Report

plus optional modules to a total value of 30 credits, chosen with the approval of the Degree Programme Director from the Stage 3 module list below.

Naval Architecture
Compulsor*y* modules with a total modular value of 50 credits:

Code	*Credits*	*Descriptive Title*
MAR302	(20)	Marine Design
MAR398	(30)	Project and Report

plus optional modules to a total value of 70 credits, chosen with the approval of the Degree Programme Director, of which modules to the value of at least 40 credits must be chosen from:

Code	*Credits*	*Descriptive Title*
MAR314	(10)	Marine Design Concepts
MAR315	(10)	Maritime Economics and Safety
MAR316	(10)	Marine Engineering III
MAR318	(10)	Marine Production Technology II
MAR319	(10)	Marine Structures IIA
MAR321	(10)	Marine Transport
MAR322	(10)	Maritime Systems Analysis
MAR327	(10)	Resistance and Propulsion II

Offshore Engineering
Compulsory modules with a total value of 90 credits:

Code	*Credits*	*Descriptive Title*
MAR303	(20)	Offshore Design
MAR311	(10)	Drilling Engineering
MAR319	(10)	Marine Structures IIA
MAR324	(10)	Offshore Engineering Analysis
MAR326	(10)	Offshore Vehicle Design
MAR398	(30)	Project and Report

plus optional modules to a total value of 30 credits, chosen with the approval of the Degree Programme Director from the Stage 3 module list below.

Small Craft Technology
Compulsory modules with a total modular value of 90 credits:

Code	*Credits*	*Descriptive Title*
MAR304	(20)	Small Craft Design

MAR318	(10)	Marine Production Technology II
MAR319	(10)	Marine Structures IIA
MAR328	(10)	Small Craft Hydromechanics
MAR329	(10)	High Speed and Advanced Craft
MAR398	(30)	Project and Report

plus optional modules to a total value of 30 credits, chosen with the approval of the Degree Programme Director from the Stage 3 module list below.

Stage 3 module list:

Code	*Credits*	*Descriptive Title*
MAR311	(10)	Drilling Engineering
MAR312	(10)	Dynamic Modelling and Simulation
MAR313	(10)	Internal Combustion Engines
MAR314	(10)	Marine Design Concepts
MAR315	(10)	Maritime Economics and Safety*
MAR316	(10)	Marine Engineering III
MAR318	(10)	Marine Production Technology II
MAR319	(10)	Marine Structures IIA
MAR320	(10)	Marine Structures IIB
MAR321	(10)	Marine Transport
MAR322	(10)	Maritime Systems Analysis
MAR324	(10)	Offshore Engineering Analysis
MAR325	(10)	Offshore Studies
MAR326	(10)	Offshore Vehicle Design
MAR327	(10)	Resistance and Propulsion II**
MAR328	(10)	Small Craft Hydromechanics**
MAR329	(10)	High Speed and Advanced Craft
MAR330	(5)	Stability of Marine Vehicles
MAR331	(5)	Naval Architecture III
MAR332	(5)	Formal Safety Assessment & Design for Safety*
MAR333	(5)	Surface Generation and Fairing
BUS310	(10)	Strategic Management and Organisational Theory
EEE335	(10)	Applied Electronics
MMM211	(10)	Materials Science II
MMM334	(10)	Automatic Control
MMM373	(10)	Joining Technology
MMM449	(10)	Thermal Power and Propulsive Systems

Candidates may select alternative modules as approved by the Degree Programme Director.

Notes: * *MAR315 and MAR332 are mutually exclusive*

** *MAR327 and MAR328 are mutually exclusive*

Development of specific Intended Learning Outcomes occurs through the following modules (compulsory modules in bold text, optional modules in normal text):

A1	Basic Mathematics and Physics that are relevant to Marine Technology	**ENM105, EEE136, MMM114, MMM151/124, MMM211, EEE235**, **MAR105,** *relevant electives*
A2	The fundamental concepts, principles and theories of Marine Technology	**MAR101, MAR103, MAR105, MAR201, MAR202, MAR203, MAR206, MAR207, MAR208, MAR213, MAR316**, *MAR320, MAR322, MAR327, MAR330, MAR331*

A3	Business and management techniques that are relevant to marine technology and marine technologists	**MMM155, ENG201, BUS310**, *MAR315, MAR321, relevant electives*
A4	Detailed knowledge and understanding of the essential facts, concepts, principles and theories relevant to the student's chosen area of specialisation within Marine Technology	**MAR201, MAR202, MAR203, MAR207, MAR208, MAR209, MAR211, MAR301, MAR302, MAR303, MAR304, MAR311**, **MAR312, MAR313**, *MAR314, MAR322, MAR324, MAR326, MAR327, MAR328, MAR329, MAR330*
A5	The role of marine technologists in society and the constraints within which their engineering judgement will be exercised	MAR212, **MAR301, MAR302, MAR303, MAR304,** *MAR315***,** *MAR321*
A6	The professional and ethical responsibilities of marine technologists	**MAR101, MAR103, MAR301, MAR302, MAR303, MAR304,** *MAR315, MAR332*
A7	The environmental issues that affect Marine Technology and the issues associated with sustainable engineering solutions	**MAR206, MAR207, MAR212**, **MAR301, MAR302, MAR303, MAR304,** *MAR314***, MAR319, MAR398**
A8	Conceptual and detailed design of artefacts appropriate to their area of specialisation	**MAR206, MAR207, MAR212**, **MAR301, MAR302, MAR303, MAR304,** *MAR314, MAR319,MAR330,* **MAR398**
A9	Production practice including codes of practice, design, the assessment of safety risks, and the legislative framework for safety.	**MMM152, MAR101, MAR103**, **MAR205**, **MAR301, MAR302, MAR303, MAR304, MAR315,** *MAR318, MAR332*
B1	Plan, conduct and report a programme of investigative work	**MAR212,** MAR325, **MAR398** & **courseworks**
B2	Analyse and solve engineering problems	**EEE136, MMM151/124, EEE235, MMM251, CIV221, MAR101, MAR103, MAR201, MAR202, MAR203, MAR206, MAR207, MAR208, MAR210, MAR213, MAR209, MAR211**, **MAR301, MAR302, MAR303, MAR304**, **MAR311, MAR312, MAR313, MAR315, MAR316, MAR 318, MAR319,** *MAR321, MAR322,* **MAR324**, *MAR325*, **MAR326**, MAR327, **MAR328, MAR329, MAR398** & *relevant electives*
B3	Design a structure or component to meet a need	**MAR212, MAR301, MAR302, MAR303, MAR304, MAR398 & courseworks**
B4	Be creative in the solution of problems and in the development of designs	**MAR212, MAR301, MAR302, MAR303, MAR304, MAR398**
B5	Evaluate designs and make improvements	**MAR212, MAR301, MAR302, MAR303, MAR304, MAR398**
B6	Integrate and evaluate information and data from a	**MAR301, MAR302, MAR303,**

	variety of sources	**MAR304, MAR398 & courseworks**
B7	Take an holistic approach to solving problems and designing systems, applying professional judgements to balance risks, costs, benefits, safety, reliability, aesthetics and environmental impact	**MAR301, MAR302, MAR303, MAR304, MAR398**
C1	Execute safely a series of experiments (E)	**MAR101, MAR103, MAR202/3, MAR210, MAR211, MAR212, MAR327**
C2	Use laboratory equipment to generate data (E)	**MAR101, MAR103, MAR202/3, MAR210, MAR211, MAR212, MAR327**
C3	Analyse experimental or computational results and determine their strength and validity	**MAR101, MAR103, , MAR202/3, MAR209, MAR210, MAR211, MAR212, MAR327**
C4	Prepare technical drawings	**MAR103, MAR301, MAR302, MAR303, MAR304, MAR398**, MAR330
C5	Prepare technical reports	**MAR103, MAR301, MAR302 MAR303, MAR304, MAR398 & courseworks**
C6	Give technical presentations	**MAR103, MAR301, MAR325, MAR398**
C7	Use the scientific literature effectively	**MAR301, MAR302, MAR303, MAR304, MAR398, courseworks**
C8	Take notes effectively	**Induction Programme**
C9	Use computational tools and packages	**CSC631, MAR104, MAR201, MAR206, MAR207, MAR212, MAR312, MAR301, MAR302, MAR303, MAR304, MAR398**
C10	Produce a conceptual or elemental design to a specification	**MAR103, MAR206, MAR207, MAR212, MAR301, MAR302, MAR303, MAR304, MAR398**
C11	Search for information to develop concepts	**MAR101, MAR103, MAR301, MAR302, MAR303, MAR304, MAR398 & courseworks**
D1	Communicate effectively (in writing, verbally and through drawings)	**MAR101, MAR103**, *MAR325*, **MAR301, MAR302, MAR303, MAR304, MAR398 & courseworks**
D2	Apply mathematical skills (algebra, geometry, modelling, analysis)	**EEE136, MMM151/124, EEE235, MMM251, CIV221, MAR101, MAR103, MAR201, MAR202, MAR203, MAR206, MAR207, MAR208, MAR210, MAR213, MAR209, MAR211**, **MAR301, MAR302, MAR303, MAR304**, **MAR311, MAR312, MAR313, MAR315, MAR316, MAR 318, MAR319,** *MAR321*, *MAR322*, **MAR324**, *MAR325*, **MAR326**,

		MAR327, **MAR328, MAR329, MAR398** & *relevant electives*
D3	Work as a member of a team (E)	**MAR212, MAR301**
D4	Use Information and Communications Technology	**MAR104, MAR301, MAR302, MAR303, MAR304, MAR398**
D5	Manage resources and time	BUS310, **MAR301, MAR302, MAR303, MAR304, MAR398 & courseworks**
D6	Learn independently in familiar and unfamiliar situations with open-mindedness and in the spirit of critical enquiry	**MAR301, MAR302, MAR303, MAR304, MAR398**
D7	Learn effectively for the purpose of continuing professional development and in a wider context throughout their career (E)	**Induction Programme, all modules**

12 Criteria for Admission:

Admission offers normally conform to the UK Engineering Council "SARTOR" minimum requirements for M.Eng. and B.Eng with Chartered Engineer status (i.e. UK GCE A-level grades BBB and CCC respectively (both including Mathematics) for Stage 1 admission). In addition, the University recruits candidates with a wide range of equivalent qualifications based on its knowledge of SARTOR equivalents and other international qualifications. A limited number of international qualifications and HND holders with appropriate subjects and grades may be considered for direct entry to Stage 2.

Engineering requires a wide range of attributes and abilities, so selection is not solely based on academic grades. Selectors seek evidence of motivation and commitment from the Personal Statement and Reference on UCAS forms and applicants are encouraged to attend for interview whenever possible.

Notwithstanding adherence to SARTOR standards, the School is committed to widening access, particularly for "late developers". Links exist with the Engineering Access Course at Newcastle College and there is a Faculty Foundation Year (Stage 0) for those with insufficient science and mathematics to enter Stage 1 directly. Limited numbers of places may be available to Regional candidates through the University's "Partners Programme". All UCAS forms, including Late or Summer applications are considered, but the School does not normally take candidates through Clearing.

Unlike many other Universities, the School is committed to retaining its B.Eng. programme, both in recognition of the number of international students who wish to graduate after three years and to avoid exclusion of potentially good applicants who have not yet been able to demonstrate M.Eng. academic standards. The first two years of B.Eng. and M.Eng. are essentially common and any candidate passing Stage 2 "with Merit" may enter Stage 3 M.Eng..

13 Support for Students and their Learning:

Services and facilities available to students include the following:

- School's Information Officer

- School's Computing Manager
- Student/staff ratio of 16:1
- Study skills instruction in Stage 1 and University Web based materials;
- Degree Programme Handbook (including Degree Regulations and Module sheets);
- Marine Science and Technology Library (including l tutorial solutions and other support materials);
- Extensive laboratories;

Induction
The first week of the first term/semester is an Induction Week with no formal teaching. During this period all students will be given detailed programme information relating to their Stage and the timetable of lectures/practicals/labs/ tutorials/etc. In particular all new students will be given general information about the School and their course, as described in the Degree Programme Handbook. The International Office offers an additional induction programme for overseas students (see http://www.ncl.ac.uk/international/coming_to_newcastle/orientation.phtml).

Study skills support
Students will learn a range of Personal Transferable Skills, including Study Skills, as outlined in the Programme Specification.

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 Student Counselling Service, the Mature Student Support Service, and a Childcare Support Officer, see:
http://www.ncl.ac.uk/undergraduate/support/welfare.phtml.

Support for Special Needs
Support for students with special needs is provided as required and the University's Disability Support Service can be consulted where appropriate. For further details see http://www.ncl.ac.uk/undergraduate/support/disability.phtml.

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/support/acfacilities.phtml.
All new students whose first language is not English are required to take an English Language test in the Language Centre. Where appropriate, in-sessional language training can be provided. The Language Centre houses a range of resources for learning other languages which may be particularly appropriate for those interested in an Erasmus exchanges. See:
http://www.ncl.ac.uk/undergraduate/support/langcen.phtml.

14 Regulation of Assessment:

Pass Marks
The pass mark, as defined in the University's Undergraduate Examination Conventions (http://www.ncl.ac.uk/calendar/university.regs/ugexamconv.html), is 40.

Course Requirements
Progression is subject to the University's Undergraduate Progress Regulations (http://www.ncl.ac.uk/calendar/university.regs/ugcont.html) and Undergraduate Examination Conventions (http://www.ncl.ac.uk/calendar/university.regs/ugexamconv.html).

Weighting of Modules
All modules studied on the programme will be given equal weight in assessing final Honours classification

Common Marking Scheme
The University employs a common marking scheme, which is specified in the Undergraduate Examination Conventions (http://www.ncl.ac.uk/calendar/university.regs/ugcont.html), namely

	Honours	**Non-honours**
<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

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:

- Approval of Examination Papers
- Vetting in-course assessments and examination scripts
- Interviewing a selection of candidates prior to the June Examination Board
- Attending the Board of Examiners meeting and participating in its deliberations
- Reviewing any subsequent special cases, either by correspondence or in special circumstances by subsequent visits to Newcastle.
- Returning a confidential report to the VC.

15 Indicators of Quality and Standards:

This programme was accredited by:

- Institute of Marine Engineering, Science and Technology (IMarEST)
- Royal Institution of Naval Architects (RINA)

Internal Review Reports

This programme was covered by the Internal Subject Review (ISR) of "Marine Science and Technology" held on April 2004 and was subsequently approved by Faculty Teaching and Learning Committee and University Teaching and Learning Committee. Summary of ISR's commendations are as follows:

- The methods by which research is promoted and clearly developed and progressed throughout the School's programmes.

- The manner in which the School had taken steps to surmount progression and retention issues.

- The wide range of recruitment activities that the School is involved in.

- The range of physical resources that the School has access to, especially as these resources are used to support not only research but also teaching. The Faculty is commended for its new large teaching laboratory in the Ridley Building.

- Liaison by the School librarian with the academics within the School.

- The support staff for their role within the School.

- The special and collaborative provision within the School, with regard to its innovative nature, the method in which it is managed, the clear rationale that has been developed for the provision, the support which exists for it and its teaching and learning strategy.

Previous QAA Reports

This programme received a QAA Subject Review in 1998 and was judged to be satisfactory

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.

16 Other Sources of Information:

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

The School Prospectus (see http://www.ncl.ac.uk/undergraduate/subjects/xxx)

The University and Degree Programme Regulations (see http://www.ncl.ac.uk/calendar/pdf/uniregs.pdf and http://www.ncl.ac.uk/calendar/sae/)

The Degree Programme Handbook

QAA Subject Review Report