PROGRAMME SPECIFICATION	

1	**Awarding Institution**	Newcastle University
2	**Teaching Institution**	Newcastle University
3	**Final Award**	BSc (Hons)
4	**Programme Title**	Applied Biology and Applied Biology with Placement
5	**UCAS/Programme Code**	C110 and C111
6	**Programme Accreditation**	Not applicable
7	**QAA Subject Benchmark(s)**	Biosciences
8	**FHEQ Level**	Honours Level
9	**Date written/revised**	12th May 2008

10 Programme Aims

The programmes aim to:

(i) provide courses of study which meet the Quality Assurance Agency Benchmark Statement for Biosciences

(ii) lead to qualifications which meet the criteria of the Honours level of the National Qualifications Framework for Higher Education for England, Wales and Northern Ireland.

(iii) produce graduates who have:

(a) thorough knowledge and understanding of the molecular and biochemical basis of biology from the subcellular to whole organism level and an appreciation of relevant topics which are currently being researched both at Newcastle and elsewhere.
(b) well developed practical skills
(c) the ability to apply quantitative and qualitative analysis to biological systems
(d) an understanding of the range of disciplines, approaches and technologies, both traditional and new that are required to study problems in biological sciences
(e) an awareness of the impact of biological sciences on society and the environment
(f) a range of core skills including: the use of communication and information technology; the ability to assemble information from a variety of sources; the ability to prioritise work and to meet deadlines; the ability to work alone and with others; and, through the use of oral, literary or numerical skills, the ability to analyse problems and issues, propose potential resolutions and criticise alternatives
(g) a training which is suitable for: subject-related careers in research and development, teaching, advisory work or management in industry or government agencies; more general careers in which there is a greater emphasis on non-subject-specific skills; or as a foundation for more advanced study.

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 Biosciences.

Knowledge and Understanding

On completing the programme students should have:

A1 A good knowledge and understanding of subjects fundamental to applied biology (biochemistry, molecular biology, microbiology, biotechnology and immunology).
A2 A good knowledge and understanding of topics in optional areas of study (human nutrition and health, and pure and applied organismal biology).
A3 A basic knowledge and understanding of topics in general biology and of relevant quantitative topics including statistics.
A4 An appreciation and knowledge of relevant current scientific developments.
A5 An understanding of the importance of considering the scientific, social including ethical, and environmental impacts of developments in applied biology.

Teaching and Learning Methods

Teaching Strategy

The primary means of imparting knowledge and understanding in all the above is through lectures supplemented, as appropriate, with practical classes, seminars and tutorials, some of which are delivered in the form of computer assisted learning (CAL) sessions. A4 is enhanced by the undertaking of an individual research project in the final year requiring a substantial literature review and interpretation of the experimentally generated data. Visiting speakers from a range of disciplines and case studies contribute to A5.

Learning strategy

Throughout the programme but especially at stages 2 and 3 students are encouraged to supplement taught material by self-study of reading materials and appropriate information on the internet to which they are directed by staff. In the final year most of the directed reading is of research papers and guidance on their effective use is provided. Short tests are administered in some modules on completion of specific topics to enable students to monitor the progress of their learning. Feedback on essays and laboratory reports allows students to refine their presentation techniques in these areas and assess the level of their knowledge and understanding.

Assessment Strategy

Assessment Strategy

Assessment of knowledge and understanding occurs by use of unseen written examinations (including essay questions, short answer and problem-solving as appropriate to the module and level of study) and by coursework (including essays, laboratory or case-study reports, in-course tests, research project work and report, oral and poster presentations). The mix of examination and coursework varies as appropriate to the module but most modules include some aspect of formative assessment during the module in addition to the summative assessment.

Intellectual Skills

On completing the programme students should have:

B1 An ability to critically evaluate information from many sources, including novel research data, in terms of its relative contribution to scientific knowledge and understanding.
B2 The capability to interpret scientific information, both quantitative and qualitative, and explain complex scientific ideas in written and oral form.
B3 An ability to: derive and recognise hypotheses based on existing knowledge; produce logical arguments based on new or existing ideas to support or disprove such hypotheses, where

possible; identify the gaps in knowledge that must be filled before conclusions about the validity of a hypothesis can be reached; rationally consider non-scientific consequences of biology including ethical issues.

Teaching and Learning Methods

Teaching Strategy

Cognitive skills are developed progressively throughout the programme in modules containing practical classes, case studies, group discussions and a variety of written work. In the final year the individual research project and its associated report requires students to display all skills B1-B3 and they are supported by their supervisor when gaining full confidence in their ability to do this. At stage 3, the Social Impacts of Biology module uses interactive lectures and seminars to develop structured thinking about non-scientific including ethical issues (B3).

Learning Strategy

In all years students are encouraged to consider information and experimental data in a critical manner and to justify interpretation by logical development of ideas and reference to known facts. Planning, executing and reporting on their final year research project enhances the learning of these skills in a less controlled environment than in earlier years. The seminars in Social Impacts of Biology, involving small group discussions and practice in writing argued cases, have the specific role of giving practice and feedback to help develop the ability to present reasoned, structured arguments.

Assessment Strategy

Cognitive skills are assessed through various forms of coursework (including laboratory reports, case studies and other forms of written work) and examinations at all three stages and through the examination for the Social Impacts of Biology module and in the assessment of the final year research project report.

Practical Skills

On completing the programme students should have acquired:

C1 Skills in quantitative techniques, including statistical analysis.
C2 Experimental skills including development of a hypothesis and the design, execution and evaluation of experiments using traditional and modern techniques and equipment.
C3 An ability to obtain record and interpret data from experiments and information in various forms from the literature, including electronic sources.
C4 Critical evaluation of data and information in terms of its quality.
C5 The ability to present data in written format according to accepted conventions for scientific communication.

Teaching and Learning Methods

Teaching Strategy

The statistical component of C1 is initially developed through a specific module (Statistical Methods) based around classes to explain and practice analysis of appropriate examples using a computer program. Practical classes associated with many modules during the first two years and also wholly practical-based modules in stages 2 and 3 (Practical Biochemistry; Laboratory Workshop) progressively develop C1, C2 and C3 which is greatly enhanced by the individual research project in the final year. The research project also makes a major contribution to C3, C4 and C5, as too does a specific Stage 2 module (Biology Communication). From the first year students are required, after appropriate guidance,

to search the literature for information and submit all written work in an appropriate scientific format so that by the final year C5 and the literature searching skills of C3 are thoroughly integrated into all submitted work.

Learning Strategy

Students are encouraged to develop appropriate quantitative and practical skills (C1-C4) by monitored attendance at and practice of skills in formal classes during the first two years and in the Laboratory Workshop at the start of stage 3 and subsequently through practice and discussion with their supervisor as part of their final year research project. From the first year all written work must be submitted in an appropriate scientific format and feedback on such work enhances learning of the skill outlined in C5.

Assessment Strategy

Biochemical quantitative techniques, in C1, are partly assessed through unseen examinations in stage 1. The whole of C1 together with C2, C3 and C5 are also assessed through coursework (laboratory reports, completion of quantitative and statistical calculation sheets, essays) during the first two years and in the Laboratory Workshop in stage 3, which to some extent also tests C4. C1-to-C5 form a major part of the assessment of the final year research project.

Transferable/Key Skills

On completing the programme students should have gained:

D1 The ability to communicate clearly by means of oral presentations and written documents appropriate to the target audience.
D2 The ability to use library and other information sources skilfully and appropriately.
D3 Effective use of communication and information technology.
D4 The ability to plan, organise and prioritise work effectively in order to meet deadlines
D5 The ability to work independently and as part of a team
D6 Problem-solving skills and initiative

In addition, students on programme C111 have the opportunity, as part of their placement experience, to develop and demonstrate:

D7 The ability to submit effective applications for employment
D8 Self-appraisal skills with regard to the development of workplace skills
D9 The ability to produce a development plan to help overcome identified skills weaknesses
D10 The ability to demonstrate personal achievement by preparation of a suitable portfolio of evidence

Teaching and Learning Methods

Teaching Strategy

Some key skills, D1-D3, are formally taught in Biology Communication while all of D1-D6 are integrated into subject-specific compulsory modules as appropriate to meet the aims of those modules. For those students on the C111 programme tutorials with the Placement Tutor help to develop D7 and D8-D9 are developed in the workplace under guidance from placement tutors.

Learning Strategy

While skills D1-D3 are formally taught, and the students obtain feedback to enhance their learning, the same skills are applied in many subject-specific modules with students required to find information and give oral or written presentation throughout all years of study. In these cases the student is learning not only subject-specific information but also D1-D3. Deadlines for submission of coursework are strictly enforced encouraging students to develop D4 and this is supported by guidance provided during Induction Week at each Stage of the programme. Students learn D5 and D6 throughout the three stages of the degree but these are particularly enhanced as part of the work associated with their final year research project plus, in the case of team work, in group assignments in two stage 3 modules (Biotechnology 2, Cell Proliferation and Death). In addition most practical classes require students to work in groups of two or more to carry out the experimental work and obtain data which provides an introduction to the more complex team-working skills that are developed subsequently. For students on the C111 programme D8-D9 are developed as part of the placement with their workplace supervisor aiding in the learning process through regular appraisals.

Assessment Strategy

Key skills form a major part of the assessed material in Biology Communication where all assessment is based on submitted coursework. In addition D1-D6 are indirectly assessed through their contribution to coursework (essays, oral and poster presentations, completion of final year research project and report) in other modules. For students on the C111 programme D7 is assessed by their ability to obtain a suitable placement and D8-D10 are assessed for the City and Guilds Licentiateship award which all students on C111 must submit for following their placement year.

12 Programme Curriculum, Structure and Features

Basic structure of the programme

In Stage 1 students are given a foundation knowledge and understanding in subjects which they will study in greater depth in subsequent years (biochemistry, microbiology and molecular genetics; contributing to learning outcome A1) and also in subjects which give a more general background in biology including statistics (contributing to learning outcome A3). Collectively these also help build the student's background for their specialism in stages 2 and 3 (contributing to learning outcome A2). The introduction to statistics also contributes towards development of learning outcome C1. Subject-specific skills, the ability to interpret scientific information and to communicate clearly (learning outcomes B2, C1-C3, C5 and D1) are each progressed in several compulsory modules as students develop the ability to carry out laboratory experiments, including recording, manipulating and interpreting data, and simple literature searches and to present information in an appropriate written format. The stage 1 optional modules also help students to broaden their general knowledge of biology (learning outcome A3) and further develop subject specific skills.

At Stage 2 the compulsory modules enhance the knowledge and understanding of the subjects fundamental to applied biology while extending broad biological knowledge (learning outcome A1). At this stage competency in quantitative techniques (learning outcome A3) is taught, practiced and assessed as components within compulsory and optional modules where their relevance can be seen most clearly. At this Stage students select to study an optional group of modules in a subject area which usually they will continue to study in Stage 3, though there is limited opportunity to move between some areas for students who wish to extend as well as deepen their studies. These options allow students to gain a good knowledge and understanding in human nutrition and health or in pure and/or applied organismal biology (learning outcome A2). At this Stage students are exposed to knowledge, including technical developments, at the forefront of some aspects of applied biology and through an industrial visit and case studies begin to appreciate the wider implications of their subject (learning outcomes A4, A5). Various modules continue to develop subject-specific skills (learning outcomes C1-C5) and students develop an ability to search for and use information from many sources and to critically evaluate data and information in terms of its quality and contribution to knowledge (learning outcomes B1,B2 and C4). Key transferable skills development (learning outcomes D1-D6) forms an integral part of both compulsory and optional modules. Students following the C110 programme can further enhance their transferable skills development by selecting an optional module specifically designed for this purpose.

The placement year is an integral part of the C111 programme occurring between Stages 2 and 3. The

year allows students to experience first-hand the application of biology in industrial situations. It enhances the understanding of concepts and processes covered theoretically in Stages 1 and 2 and puts much of their previous knowledge into context. In addition to many subject specific skills which are developed (learning outcomes C1-C5) students enhance their cognitive skills (learning outcomes B1-B3) and develop additional transferable skills (D7-D10).

Stage 3 is the culmination of the degree programme in which the individual research project makes a significant contribution (undertaken in an active research laboratory and supervised by a member of staff with current research activity in a related area). The project requires students to have an in depth knowledge of a particular subject area (learning outcomes A1 or A2) and particularly to be aware of current developments at the forefront of research in that area (learning outcome A4). Completion of the project, as reflected in the written report, demands high quality subject-specific, cognitive and transferable skills (learning outcomes B1-3, C1-5 and D1-6). Individual and group activities within lecture-based and seminar-based modules enhance some of these further (B1-3, D1-6). Lecture modules continue to develop good knowledge and understanding of core and optional subject areas (learning outcomes A1 and A2) and one module is dedicated to consideration of scientific, social, ethical and environmental issues of relevance to biologists (learning outcome A5). All modules taught at Stage 3 make substantial use of original research papers to support lecture material ensuring that students are aware of current developments and are able to deal critically with such information (learning objectives A4, B1-3,C3, C4,). Components of compulsory and several optional modules further develop the students' abilities to produce written reports and essays, oral presentations using appropriate visual aids and poster presentations (learning outcomes B1-B2, C3-C5, D1-D3). Transferable skill development is integrated into most Stage 3 modules with time management (learning outcome D4) being particularly important at this Stage.

Progression Requirement

These are as specified by current University regulations. In addition, individual module outlines indicate prerequisites that should normally be met before modules compulsory or optional at the following stage are attempted.

Assessment Methods

The following assessment methods will be used: unseen written examination papers; assessment of practical classes; assessment of written assignments; assessment of oral presentations; assessment of practical project and related dissertation; an oral examination may be held.

Details of the assessment methods are specified on the appropriate module outline forms.

Substitution of Modules

With the permission of the Degree Programme Director candidates may substitute another module of an equivalent value and standard for any of the modules listed at any Stage of the degree programme.

Honours Performance

Candidates will be assessed for Honours performance on the basis of the assessment of all the modules taken at Stage 2 plus all the modules taken at Stage 3. Stage 2 modules contribute 25 per cent towards Honours performance, whilst Stage 3 modules contribute 75 per cent towards Honours performance.

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

The successful application of biology depends on a sound understanding of how organisms function. This course provides grounding in the molecular and physiological basis of biology from the subcellular to the whole-organism level, with the opportunity to concentrate on specific areas of applied biology at Stages 2 and 3.The programmes are three-year (C110) and four-year (C111 - which includes a placement year in

industry) full-time modular programmes.

Each non-placement year (Stage) consists of a taught component of 120 credits/year comprising compulsory and optional modules with values of 10 or 20 credits. 10 credits are associated with 100 hours of study time (including timetabled classes and private study time).

The mix of compulsory:optional modules is 100:20 credits in each of Stages 1 and 2 and 80:40 in stage 3.

In Stage 1 the optional modules can be freely selected from a specified list but in Stages 2 and 3 the selection is of a specified area of study (Stage 2: human nutrition or applied or pure organismal biology; Stage 3: applied microbiology; human nutrition and health, applied or pure organismal biology together with an option of a business module). Students on C110 may substitute a 10-credit module designed to enhance their workplace skills for one of their optional modules at Stages 2 and 3 if they wish: students on C111 gain workplace skills during their placement so this option is not available to them.

Progression from Stages 1 and 2 to the subsequent Stage is dependent on having an overall average mark of greater than 40%. There is limited compensation for marks of at least 35%. Two resits are permitted for each module if necessary.

Particular features of the programmes are:

- Opportunity to gain workplace skills either through placement year or optional modules
- Opportunity to gain recognised qualification for placement year awarded by City and Guilds
- High content of laboratory-based practical work
- The opportunity to select an optional subject area to study in-depth
- A stage 3 module that addresses bioethics and the social responsibilities of biologists
- Opportunity to carry out an individual research project in a dynamic research environment

Programme regulations (link to on-line version)

http://www.ncl.ac.uk/regulations/programme/

Degree of Bachelor of Science with Honours in Applied Biology
UAS Code: C110 (with Placement Year C111)

Notes

(i) *These programme regulations should be read in conjunction with the University's Undergraduate Progress Regulations and Examination Conventions.*

(ii) *All optional modules are offered subject to the constraints of the timetable and to any restrictions on the number of students who may be taught on a particular module. Not all modules may be offered in all years and they are listed subject to availability.*

(iii) *A compulsory module is a module which a student is required to study.*

(iv) *A core module is a module which a student must pass, and in which a fail mark may neither be carried nor compensated; such modules are designated by the board of studies as essential for progression to a further stage of the programme or for study in a further module.*

1. Stage 1

a) Unless otherwise stated modules are not core.

b) All candidates shall take the following compulsory modules:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
ACE1013	Introduction to Genetics	10	10		C	
ACE1019	Introductory Biochemistry for Biologists	20	10	10	C	
BIO1001	Cell Biology	10	10		C	
BIO1002	The Animal Kingdom	10	10		C	
BIO1003	Plant Biology 1	10		10	C	
BIO1004	Microbiology 1	10	10		C	
BIO1005	Evolution	10	10		C	
BIO1006	Ecology 1	10		10	C	
MAS1401	Statistical Methods	10		10	C	

(c) All candidates shall take an optional module or pair of modules from the following list to a total value of 20 credits:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
MST1001	Biodiversity of Marine Animals	20		20	C	

OR

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
PSY1006	Instinct, learning and motivation	10		10	C	
PSY1009	Cognition, Emotion and Stress	10		10	C	

OR

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
ACE1012	Domestic Animal Physiology	10	10		C	
ACE1022	Crop Pests	10		10	C	

With the approval of the Degree Programme Director alternative optional modules to those listed above may be selected.

2. Stage 2

(a) All candidates shall take the following compulsory modules:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
ACE2034	Introduction to Immunology	10		10	I	
ACE2036	Nutrition Principles	10	10		I	
BIO2001	Biology Communication	10	10		I	
BIO2005	Practical Biochemistry	10		10	I	
BIO2010	Molecular Biology & Genomics	10	10		I	
BIO2014	Animal Physiology	10	10		I	
BIO2015	Biotechnology 1	10		10	I	
BIO2016	Metabolism	10	10		I	
BIO2017	Microbiology 2	10		10	I	
MST2010	Animal Development	10		10	I	

(b) All candidates shall take 20 credits of optional modules from one the following groups:

EITHER

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
ACE2031	Animal Parasitology	10		10	I	
BIO2006	Entomology	10	10		I	

OR

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
BIO2004	Plant Biology 2	10	10		I	
BIO2008	Population Genetics	10		10	I	
BIO2018	Pollution of Air, Water & Soil 1	10	10		I	

OR

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
ACE2037	Experimental Human Nutrition	10		10	I	
ACE2038	Introduction to Human Nutrition	10	10		I	

With the approval of the Degree Programme Director alternative optional modules to those listed above may be selected.

3. Year 3 (Intercalating Year)

On completion of Stage 2 and before entering Stage 3, candidates may as part of their studies for the degree spend a year in a placement with an approved organisation. Permission to undertake a placement is subject to the approval of the Degree Programme Director.

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
ICM0002	Intercalating Module	120	60	60		

4. Stage 3

(a) All candidates shall take the following compulsory modules:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
BIO3013	Cell Proliferation and Death	20		20	H	
BIO3015	Social Impact of Biology	10		10	H	
BIO3018	Biotechnology 2	10	10		H	
BIO3019	Genomics	10	10		H	
BIO3021	Laboratory Workshop	10	10		H	
BIO3096	Research Project	20	10	10	H	

(b) All candidates shall take at least one of the following modules but may select all Three:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
BIO3020	Bioremediation	10		10	H	
BIO3023	Plant Pathology	10	10		H	
BIO3027	Microbiology 3	10		10	H	

(c) All candidates must select one, two or three modules from **ONE** of the following groups to

make a total of 120 credits for the whole degree stage 3 – Students cannot select the credits from more than one group

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
BIO3006	Plant-Animal Interactions	10		10	H	
BIO3009	Biological Control	10	10		H	
BMS3003	Business for Bioscientists	10	10		H	

OR

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
ACE3051	Human Nutrition and Health	10		10	H	
ACE3052	Human Nutrition	10	10		H	
ACE3053	Nutrition and Disease	10	10		H	

OR

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
BIO3001	Animal Ecophysiology	10	10		H	
BIO3004	Photosynthesis	10	10		H	
BIO3007	Pollution of Air, Water and Soil	10		10	H	

With the approval of the Degree Programme Director alternative optional modules to those listed above may be selected.

5. Assessment methods

Details of the assessment pattern for each module are explained in the module outline.

6. Degree classification

Candidates will be assessed for degree classification on the basis of all the modules taken at Stages 2 and 3 with the weighting of the stages being 1:3 for Stage 2 and Stage 3 respectively.

13 Criteria for admission

Entrance Requirements

A Levels

ABB normally including Biology and another science subject but excluding General Studies. Chemistry is preferred at A or AS level, but not essential. GCSE Mathematics (minimum grade B) required if not offered at A or AS level.

Scottish Qualifications

AAAB at Higher Grade including two science subjects. Advanced Higher Biology and another science subject normally required. Higher Grade Chemistry desirable.

International Baccalaureate

32-35 points normally including Higher Level Biology at grade 6 or above. Chemistry is preferred at Higher Level but not essential. Mathematics or Mathematical Studies and Chemistry required at Standard Level grade 5 if not offered at Higher Level.

Irish Leaving Certificate

AABBB at Higher level, preferably including Biology and Chemistry.

Access Qualifications

A module in Biological Sciences is essential and modules in Chemistry, Mathematics or Quantitative Methods desirable (three modules at Distinction/Credit grade for HEFC).

BTEC National Diploma

A science-related subject with substantial biology and chemistry units at overall DDM grade.

Please Note that unless otherwise indicated, all candidates with qualifications other than those specifically listed are considered on an individual basis. Please refer to Please refer to Entrance Requirements for a full explanation.

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.

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.

Help with academic writing is available from the Writing Centre.

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. In addition the University offers a range of support services, including one-to-one counselling and guidance or group sessions/workshops on a range of topics, such as emotional issues eg. Stress and anxiety, student finance and budgeting, disability matters etc. There is specialist support available for students with dyslexia and mental health issues. Furthermore, the Union Society operates a Student Advice Centre, which can provide advocacy and support to students on a range of topics including housing, debt, legal issues etc.

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.

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.

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.

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. 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. Every five years degree programmes in each subject area are subject to periodic review. This involves both the detailed consideration of a range of documentation, and a two-day review visit by a review team which includes an external subject specialist in addition to University and Faculty representatives. Following the review a report is produced, which forms the basis for a decision by University Teaching and Learning Committee on whether the programmes reviewed should be re-approved for a further five year period.

16 Regulation of assessment

Pass mark
The pass mark is 40

Course requirements
Progression is subject to the University's Undergraduate Progress Regulations and Undergraduate Examination Conventions. 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.

Weighting of stages
The marks from Stages 2 & 3 will contribute to the final classification of the degree
The weighting of marks contributing to the degree for Stages 2 & 3 is 25:75

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:

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

C Curriculum Structure

Achievement of specific Intended Learning Outcomes (A-D) occurs through provision in the **compulsory** and *optional* modules specified for each Stage in the Degree Programme Regulations, as follows:

Code	Type	A	B	C	D
Stage 1					
ACE1019	**Compulsory**	**1**	**2**	**1-5**	**1-5**
MAS1401	**Compulsory**	**3**	**2**	**1**	
BIO1001	**Compulsory**	**1,3**		**3**	**1**
BIO1005	**Compulsory**	**3**	**2**		**1**
BIO1004	**Compulsory**	**1**	**2**	**1,2,5**	**1,2,5**
ACE1013	**Compulsory**	**1,3**	**2**		**1,3,6**
BIO1006	**Compulsory**	**3**	**2**	**1,3-5**	**1,3-6**
BIO1003	**Compulsory**	**3**			**1,2,4,5**
BIO1002	**Compulsory**	**3**			**1,2,5**
ACE1012	*Optional*	*3*			
ACE1022	*Optional*	*3*			
MST1001	*Optional*	*3*	*2*	*1-3,5*	*1,5*
PSY1006	*Optional*	*3*			
PSY1009	*Optional*	*3*			
Stage 2					
BIO2017	**Compulsory**	**1,3**	**2**	**2,3**	**1,3-6**
BIO2016	**Compulsory**	**1,3**	**2**	**3**	**1-**
BIO2005	**Compulsory**	**1**	**1-3**	**1-5**	**1-6**
BIO2001	**Compulsory**		**1-3**	**3-5**	**1-5**
ACE2036	**Compulsory**	**1,3**	**2**		**1**
BIO2010	**Compulsory**	**1**	**2**		**1-5,6**
BIO2015	**Compulsory**	**1,4**	**2**	**1-3**	**1,2,4-6**
ACE2034	**Compulsory**	**1**			
BIO2014	**Compulsory**	**1,3**		**2**	**1**
MST2010	**Compulsory**	**2**	**2**	**2,3**	**1,3-6**
Subject Group A					
BIO2006	*Optional*	*2*	*2*	*1-3,5*	*1,3,5*
ACE2031	*Optional*	*2*	*2*	*1,3*	*1-6*
Subject Group B					
BIO2008	*Optional*	*2*	*2*	*2-4*	*1,3,5,6*
BIO2004	*Optional*	*2*	*2*	*1-4*	*1,3,6*
BIO2018	*Optional*	*2*	*2*	*3-5*	*1-3,5*
Subject Group C					
ACE2038	*Optional*	*2*	*2*	*1-4*	*1-6*
ACE2037	*Optional*	*2*	*2*	*1-4*	*1-6*
Other Optional Modules					
NCL2001/2002	Optional				1,3-6
Placement Year (C111 only) Compulsory					7-10
Stage 3					
BIO3018	**Compulsory**	**1,4**	**1,2**	**3,4**	**1-6**
BIO3013	**Compulsory**	**1,4**	**1-3**	**3,4**	**1-6**
BIO3015	**Compulsory**	**1,4,5**	**1-3**		**1**
BIO3096	**Compulsory**	**All**	**1-3**	**All**	**1-4**
BIO3019	**Compulsory**	**1,4**			
BIO3021	**Compulsory**	**1,6**	**All**	**1**	**All**
BIO3020	*Optional*	*1,2,4*	*1,2*	*1-3,5*	*1-5*
BIO3023	*Optional*	*1,2,4*			
BIO3027	*Optional*	*1,4,6,7*	*2,3*		*1,2,3*
Subject Group A					
BMS3003	*Optional*	*2,4*	*1,2*		*1,5*

Code	Type	A	B	C	D
BIO3006	*Optional*	*2,4*	*1,2*		*1*
BIO3009	*Optional*	*2,4,5*	*1,2*		*1,2*
Subject Group B					
ACE3052	*Optional*	*2,4*	*1,2*		*1*
ACE3053	*Optional*	*2,4*	*1,2*		*1-6*
ACE3051	*Optional*	*2,4,5*	*1-6*	*1,2*	
Subject Group C					
BIO3001	*Optional*	*2,4*	*1,2*	*3,4*	*1-3.5.6*
BIO3004	*Optional*	*2,4*	*1,2*		*1,4,6*
BIO3007	*Optional*	*2,4*	*1,2*		