PROGRAMME SPECIFICATION	

1	**Awarding Institution**	Newcastle University
2	**Teaching Institution**	Newcastle University Singapore Institute of Technology
3	**Final Award**	B.Sc.
4	**Programme Title**	Food & Human Nutrition
5	**UCAS/Programme Code**	1208U
6	**Programme Accreditation**	N/A
7	**QAA Subject Benchmark(s)**	Biosciences; Agriculture, forestry, agricultural sciences, food sciences and consumer sciences.
8	**FHEQ Level**	6
9	**Date written/revised**	27th May 2014

10 Programme Aims

1. To facilitate the general higher education and intellectual development of well motivated students, within the context of the science of food and human nutrition.
2. To encourage students to develop an informed interest in the science of food, human nutrition and health and to engender an awareness of a) the impact of food production and processing on the environment and b) the central importance of food-related activities on society.
3. To produce graduates who have a) a thorough understanding of the scientific basis of food and human nutrition and of relationships between food, nutrition and human health that is informed by research b) a range of core skills including the use of communication and information technology; the ability to assemble, evaluate and use information from a variety of sources; the ability to prioritise work and to meet deadlines; the ability to work alone and in teams; and, through the use of oral, literary and/or numerical skills, the ability to analyse issues and problems, propose potential resolutions and to derive critical accounts of alternatives.
4. To lead to a qualification which meets the FHEQ at Honours level and which takes appropriate account of the subject benchmark statements in Biosciences: Agriculture, forestry, agricultural sciences, food sciences (FS) and consumer sciences (CS).

11 Learning Outcomes

The programme provides opportunities for students to develop, integrate, practise and demonstrate knowledge and understanding of the range of biomedical, chemical and social science disciplines on which a sound understanding of the relationships between food, nutrition and health is based. These outcomes are referenced in the following sections to benchmark statements for Biosciences (B); Agriculture, forestry, agricultural sciences, food sciences (FS) and consumer sciences (CS).

Knowledge and Understanding

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

A1 A good knowledge and understanding of fundamental biomedical subjects including biochemistry, physiology, microbiology and genetics.

- Be able to express relevant biological reactions in chemical terms (*B*)
- Understand how the chemistry and structure of the major biological macromolecules, including proteins and nucleic acids, determines their properties (*B*)
- Explain and undertake standard methods for the detection and enumeration of micro-organisms important in the food industry (*FS*)
- Explain the importance of hygiene and waste management systems for the food industry (*FS*)

A2 A good knowledge of human nutrition, food science and of the links between food, nutrition and health.

- Demonstrate understanding of the chemistry underpinning molecular interactions and the behaviour of components in food materials during processing and storage (*FS*)
- Describe biochemical, physical and biological factors underlying the synthesis and metabolism of food materials (*FS*)
- Describe physical properties of food and experimentally determine their values (*FS*)
- Explain the role of nutrients in health (*FS*)
- Describe the principles and practice of major food processing operations and food preservation systems (*FS*)

A3 A basic knowledge of molecular genetics and food biotechnology.

- Understand how the principles of genetics underlie much of the basis of modern molecular biology (*B*)

A4 A basic understanding of national (Singapore/UK/EU) and international policies relevant to food, nutrition and health.

A5 An appreciation of recent developments in science relating particularly to the interactions between genetic inheritance and environmental factors, including diet which influence the risk of common non-communicable diseases.

- Explain the role of nutrients in health (*FS*)
- Describe the risks to health of key chemical contaminants of foods (*FS*)

A6 An understanding of the scientific, societal and environmental contexts in which decisions about the application of scientific developments relevant to food and human nutrition are taken.

- Describe the food law framework within which food businesses operate (*FS*)
- Describe a range of social and individual factors in the formation of consumer knowledge (*CS*)
- Describe a range of social and individual factors in consumer attitudes and choices (*CS*)
- Recognise and be able to comment on the moral and ethical issues associated with the subject (*FS*)

Teaching and Learning Methods

Teaching Methods
The primary means of imparting knowledge and understanding in all the above is through lectures supplemented, as appropriate, with practical classes, on-line support, seminars and tutorials, many of which are supported through the University's virtual learning environment, Blackboard. A5 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 and web casts, attendance at scientific meetings and seminars contribute to A4-A6.

Learning Methods
Throughout the programme 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 is 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 dissertation, 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 be able to:

B1 Develop hypotheses and design, execute and analyse data for a range of study types including laboratory-based, clinical and nutritional epidemiological studies.
- Plan, conduct and present an independent investigation with some reliance on guidance (*FS*)
- Use appropriate laboratory and field equipment competently and safely (*FS*)
- Select and apply a range of appropriate methods to solve problems (*FS*)

B2 Use statistical procedures to facilitate the design of studies and the analysis of collected data.
- Define a suitable and effective sampling procedure (*FS*)
- Recognise incomplete sets of information and propose appropriate solutions (*FS*)
- Understand risk (*FS*)
- Process and interpret data effectively (*FS*)
- Solve a range of numerical problems using appropriate techniques (*FS*)
- Select and apply a range of appropriate methods to solve problems (*FS*)

B3 Demonstrate skills in a range of quantitative and qualitative techniques used in the area of food and human nutrition.
- Safely use methods of analysis for most types of large and small molecules of relevance to food (*FS*)
- Use appropriate technology to address problems efficiently (*FS*)
- Use appropriate laboratory and field equipment competently and safely (*FS*)
- Handle computer-based information using appropriate techniques or packages (*FS*)
- Describe clearly and record accurately in the field and in the laboratory (*FS*)
- Design, apply and interpret statistically valid sensory evaluation methods to assess food quality and/or preference (*FS*)

B4 Critically evaluate data from a variety of sources
- Analyse, synthesise and evaluate information (*FS*)
- Critically appraise academic literature and other sources of information (*FS*)
- Interpret practical results in a logical manner (*FS*)

B5 Present data in written format according to accepted scientific conventions.
- Relate investigations to prior work and to reference appropriately; recognise when information is incomplete (*FS*)
- Describe clearly and record accurately in the field and in the laboratory (*FS*)
- Present research findings in a number of formats effectively and appropriately (*FS*)

Teaching and Learning Methods

Teaching Strategy
Practical classes associated with modules in Year 1 progressively develop B1 which is greatly enhanced by the individual research project in the final year. B2 and B3 are developed through Research Methods for Food and Human Nutrition and teaching of data handling in laboratory classes, involving lectures followed by smaller group calculation classes or computing classes and completion of appropriate example calculations and analyses. These fundamental skills in B1, B2 and B3 are honed in Year 2 by the research project which makes a major contribution to B3, B4 and B5. 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 B4 and B5 are thoroughly integrated into all submitted work.

Learning Strategy
Students are encouraged to develop appropriate quantitative and practical skills (B1-B4) by monitored attendance at formal classes during the first year 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 B5.

Assessment Strategy

Assessment Strategy
B2 and B3 are assessed through unseen examinations and, together with B5, through coursework (laboratory reports, completion of quantitative and statistical calculation sheets, essays). Together with B1 and B4 these skills form a major part of the assessment of the final year research project.

Practical Skills

A successful student will be able to:

C1 Critically analyse information and arguments derived from a range of sources.
- Demonstrate ability to define problems, devise and evaluate solutions to both routine and unfamiliar problems (*FS*)
- Analyse, synthesise and evaluate information (*FS*)
- Demonstrate the ability to consider issues from a range of multi-disciplinary and inter-disciplinary perspectives and to draw on appropriate concepts and values in arriving at a critical assessment (*FS*)

C2 Interpret scientific information, both quantitative and qualitative.
- Analyse, synthesise and evaluate information (*FS*)
- Integrate lines of evidence from a range of sources to support findings and hypotheses (*FS*)

C3 Derive and recognise hypotheses based on existing knowledge; to advance logical arguments, based on new or existing scientific evidence, to support or refute hypotheses; identify gaps in knowledge and propose means for filling them.

- Analyse, synthesise and evaluate information (*FS*)
- Integrate lines of evidence from a range of sources to support findings and hypotheses (*FS*)
- Demonstrate the ability to consider issues from a range of multi-disciplinary and inter-disciplinary perspectives and to draw on appropriate concepts and values in arriving at a critical assessment (*FS*)
- Relate investigations to prior work and to reference appropriately; recognise when information is incomplete (*FS*)

C4 Produce rational analyses of complex problems, in particular, those involving the application of scientific advances in the areas of food and human nutrition.

- Integrate lines of evidence from a range of sources to support findings and hypotheses (*FS*)
- Explain the role of nutrients in health (*FS*)

Teaching and Learning Methods

Teaching Strategy
Cognitive skills are developed progressively throughout the programme in modules containing practical classes, case studies, small group discussion tutorials and essays. This is a particular feature of the final year where students undertake critical reviews of recently published papers. In the final year the individual research project and its associated dissertation require students to display all skills C1-C3 and they are supported by their supervisor when gaining full confidence in their ability to do this.

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 the previous year.

Assessment Strategy

Assessment Strategy
Cognitive skills are assessed through various forms of coursework (including laboratory reports, case studies and essays), culminating in assessment of the final year research project dissertation. In the final year, student appraisal of recently published papers is assessed according to predetermined criteria. The General Examination Paper is a formal, unseen paper which also assesses these skills.

Transferable/Key Skills

On completing the programme students should be able to:

D1 Communicate clearly and effectively through written documents and oral presentations in ways that are appropriate to the target audience.
- Communicate effectively on a range of consumer issues (*CS*)
- Communicate effectively to audiences in written, graphical and verbal forms (*FS*)
- Use computer packages selectively to convey information effectively (*FS*)

D2 Make effective use of library and other sources of information.
- Critically appraise academic literature and other sources of information (*FS*)
- Recognise and use a range of information sources effectively (*FS*)
- Use the internet critically for communication and information retrieval (*FS*)

D3 Make effective use of communication and information technology.
- Communicate effectively on a range of consumer issues (*CS*)
- Recognise and use a range of information sources effectively (*FS*)
- Use computer packages selectively to convey information effectively (*FS*)

D4 Plan, organise and prioritise work effectively to meet deadlines.
- Take a responsible, adaptable and flexible approach to study and work (*FS*)
- Develop the skills necessary for self-managed and lifelong learning (eg independent study, time management, organisational skills) (*FS*)
- Take a responsible, adaptable and flexible approach to study and work (*FS*)

D5 Work independently and as part of a team.
- Contribute coherently to group discussions (*FS*)
- Listen to, and evaluate the views of others (*FS*)
- Organise a team effectively (*FS*)
- Contribute effectively to team work (*FS*)
- Identify individual and collective goals (*FS*)
- Recognise and respect the views of others (*FS*)
- Reflect on performance as an individual and team member (*FS*)
- Take a responsible, adaptable and flexible approach to study and work (*FS*)
- Understand and be able to apply professional codes of conduct (*FS*)

D6 Demonstrate problem-solving skills and initiative.
- Analyse, synthesise and evaluate information (*FS*)
- Integrate lines of evidence from a range of sources to support findings and hypotheses (*FS*)
- Demonstrate the ability to consider issues from a range of multi-disciplinary and inter-disciplinary perspectives and to draw on appropriate concepts and values in arriving at a critical assessment

(*FS*)
- Relate investigations to prior work and to reference appropriately; recognise when information is incomplete (*FS*)
- Critically appraise academic literature and other sources of information (*FS*)

D7 Research employment opportunities, to prepare and submit effective applications for employment and to gain skills in effective presentations at interview.
- Identify individual and collective goals (*FS*)
- Reflect on performance as an individual and team member (*FS*)
- Develop the skills necessary for self-managed and lifelong learning (eg independent study, time management, organisational skills) (*FS*)

D8 Produce a development plan to help overcome identified skills weaknesses.
- Identify individual and collective goals (*FS*)
- Reflect on performance as an individual and team member (*FS*)
- Analyse personal strengths and weaknesses (*FS*)
- Identify and work towards targets for personal, career and academic development (*FS*)
- Develop the skills necessary for self-managed and lifelong learning (eg independent study, time management, organisational skills) (*FS*)

Teaching and Learning Methods

Teaching Strategy
Some key skills, D1-D3, are formally taught in specific modules (for example Advanced Nutrition in Practice, Plants for Food and Medicinal Use) while the others are integrated into subject-specific modules as appropriate to meet the aims of those modules e.g. team-working in Experimental Human Nutrition, in Sports and Exercise Nutrition and in Plants for Food and Medicinal Use and D4 in the final year project. All students benefit from tutorials and one-to-one sessions with Personal Tutors to develop D7 and D8, through development of Personal Development Plans.

Learning Strategy
While skills D1-D3 are formally taught, and the students obtain feedback to enhance their learning as parts of individual modules, 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 the generic skills described in 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 in each year of the programme.

Students learn D5 and D6 as part of the work associated with their final year research project and as parts of other modules with specific and substantial assignments (Integrating Food and Human Nutrition, Advanced Nutrition in Practice, Sports and Exercise Nutrition). 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.

Assessment Strategy

Assessment Strategy
Key skills form all or part of the assessment for Integrating Food and Human Nutrition 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 dissertation).

12 Programme Curriculum, Structure and Features

Basic structure of the programme

The normal Undergraduate year is approximately 31 weeks, divided into two Semesters. This programme normally lasts two years, although it is possible to take a gap year, for example to spend time in industry to gain practical experience.

Every Honours student studies 120 credits in each year. Students graduating from this programme with a BSc will have completed 240 credits.

A University credit is the equivalent of 10 notional hours of student study. Each module is a self-contained part of the programme of study and carries a credit rating. Progression from Year 1 to Year 2 is dependent on having an overall average mark, albeit of greater than 40. A mark of at least 40 must be achieved in all modules with limited compensation for marks of at least 35. Two resits are permitted for each module in Year 1 if necessary.

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

This programme is specifically designed for those candidates who have successfully completed a Diploma in a relevant subject at any polytechnic in Singapore, or any other programme equivalent to Stage 1 of a BSc Degree Programme in the School of Agriculture, Food & Rural Development, Newcastle University.

This programme is delivered by Newcastle University in collaboration with the Singapore Institute of Technology. The quality and standard of delivery in Singapore will be the same as the delivery of similar programmes in the School of Agriculture, Food & Rural Development at Newcastle University. Successful candidates will be awarded a BSc (Honours) degree from Newcastle University.

After successful completion of Year 1 in Singapore, students will have the option of attending an immersion programme delivered at Newcastle University campus during the summer vacation.

Programme regulations (link to on-line version)

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

13 Criteria for admission

Entry qualifications
Students are admitted on an individual basis but typical entrance requirements are as listed below with particular conditions tailored to each individual.

The programme is designed for students who wish to understand the science of food and human nutrition and are interested in the practical applications of this science.
Academic admission normally conforms to the minimum requirements for entry to Stage 2 of the equivalent Newcastle University BSc degree programme in any of the UG degree programmes in the School of Agriculture, Food & Rural Development. A Diploma in a relevant subject area awarded by any polytechnic in Singapore is an accepted entry qualification and other equivalent international qualifications, comprising means appropriate subjects, grades, may also be considered.

Admissions policy/selection tools
Undergraduate selectors at Newcastle University will consider applications from polytechnic graduates or outside candidates who may qualify to enter this degree programme. Academic selectors seek evidence of motivation and commitment from the Personal Statement and Reference on application forms and applicants are encouraged to attend for interview whenever possible.

Level of English Language capability
Applicants from polytechnics in Singapore who have successfully completed their Diploma and previous education in English would qualify to apply for this degree programme and are exempt from English language proficiency test. Other applicants, whose first language is not English, would be required to demonstrate achievement of IELTS 6.5 or an equivalent certificate in English.

14 Support for Student Learning

Induction
This degree programme is delivered in collaboration with the Singapore Institute of Technology within the Nanyang Polytechnic Campus in Singapore. During the first week of the first semester students attend an Induction programme provided by Newcastle University (in addition to Induction provided by the Singapore Institute of Technology). New students are given a general introduction to life as a Newcastle University student in Singapore, to the principle support services that will be available to students and to general information about 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.

Services and facilities available to support students' learning include the following:

- Degree Programme Handbook (including Degree Regulations);
- Nanyang Polytechnic library and Newcastle University's electronic Library;
- E-mail facilities;
- Extensive laboratories and computing facilities in Nanyang Polytechnic;

Study skills support
Students will develop 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.

Academic support
The initial point of contact for a student is with a lecturer or module leader, or their tutor in the first instance (see below for more generic issues). Thereafter the Degree Programme Director (Newcastle University) or Head of School (Newcastle University) 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 in Singapore 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/life/support/tutor.htm

In addition Newcastle University and the Singapore Institute of Technology offer a range of support services, details of which are available on the following websites:
For Newcastle University:
http://www.ncl.ac.uk/undergraduate/life/support/
For Singapore Institute of Technology:
http://www.singaporetech.edu.sg/student-counseling

Support for students with disabilities
The Nanyang Polytechnic Disability Support Service also provides help and advice for disabled students (advice about facilities, services and the accessibility of campus). The Singapore Institute of Technology provide further guidance in study skills and advice on financial support arrangements.

Learning resources
Newcastle University's main learning resources are provided by the Robinson Library (for books, journals, online resources), and by Information Systems and Services, which supports campus-wide computing facilities.

Students on this programme will be able to have access to a wide range of computing facilities through Newcastle University's "Remote Applications System" or ras.ncl.ac.uk. For more information see http://www.ncl.ac.uk/undergraduate/facilities/index.htm
Increasingly, library material is available electronically via remote access so some of Newcastle University's library holdings will be available to students in Singapore

The Singapore Institute of Technology, through facilities available at Nanyang Polytechnic, provides an extensive and advanced library facility with access to media, e-books, databases, e-journals and many other information resources such as OPAC on their library catalogues. More information can be found at: http://library.nyp.edu.sg

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 in Singapore and Newcastle University. Changes to, or the introduction of new, modules are considered at the School of Agriculture, Food & Rural Development Teaching and Learning Committee and consequently at the Board of Studies. Student opinion is sought at the Staff-Student Committee in Singapore, which reports back to Board of Studies and/or by comments from students' representatives directly sent to the Board of Studies at Newcastle University. New modules and major changes to existing modules are subject to approval by the Faculty Teaching and Learning Committee at Newcastle University.

Programme reviews
The Board of Studies conducts an Annual Monitoring and Review of the degree programme and reports to the 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, either through the Staff-Student Committee or by direct communication between student representatives.

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 in Singapore (see above) and the Board of Studies.

Mechanisms for gaining student feedback
Feedback is channelled via the Staff-Student Committee in Singapore and the Board of Studies in Newcastle.

Faculty and University Review Mechanisms
The programme is subject to the University's Internal Subject Review process, see http://www.ncl.ac.uk/quilt/assets/documents/qsh-isr-policy.pdf

Accreditation reports
The programme in Singapore has recently been accredited by the Association for Nutrition.

16 Regulation of assessment

Pass mark
The pass mark is 40 (Undergraduate programmes).

Course requirements
Progression is subject to NU's Undergraduate Progress Regulations (http://www.ncl.ac.uk/regulations/docs/) and Undergraduate Examination Conventions (http://www.ncl.ac.uk/regulations/docs/). In summary, students must pass, or be deemed to have passed, 120 credits at each Year. Limited compensation up to 40 credits and down to a mark of 35 is possible at Year 1and there are resit opportunities, with certain restrictions.

Weighting of stages
The marks from Year 1 and Year 2 will contribute to the final classification of the degree. The weighting of marks contributing to the degree for Year 1is 25% and Year 2 is 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)
<40	Fail
40-49	Third Class
50-59	Second Class, Second Division
60-69	Second Class, First Division
70+	First Class

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:

- To report to the University on the appropriateness of the standards of its awards, by reference to published national subject benchmarks, the Framework for Higher Education Qualifications, programme specifications and other relevant information;
- To assist the University in the comparison of academic standards with those of similar programmes in other UK higher education institutions;
- To ensure that the University's processes for assessment, examination and the determination of awards are sound and have been fairly conducted;
- To report on the standards of student achievement;
- To identify, where appropriate, examples of good practice in teaching and learning

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

The University Prospectus: http://www.ncl.ac.uk/undergraduate/degrees/

The School Brochure: enquiries@ncl.ac.uk

The University Regulations: http://www.ncl.ac.uk/regulations/docs/

The Degree Programme Handbook:
http://www.ncl.ac.uk/afrd/study/undergrad/sitnutrition/programme.htm

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

A1	A good knowledge and understanding of fundamental biomedical subjects including biochemistry, physiology, microbiology and genetics.	**ACE2112, ACE2136, ACE2138, ACE2141,**
A2	A good knowledge of human nutrition, food science and of the links between consumer behaviour, nutrition and health.	**ACE2136, ACE2137, ACE2138, ACE2140, ACE2141, ACE2148, ACE2156, ACE3154, ACE3156, ACE3162, ACE3163, ACE3183, ACE3184, ACE3186, ACE3190,**
A3	A basic knowledge of molecular genetics and food biotechnology.	**ACE2112, ACE2141, ACE3154, ACE3173**
A4	A basic understanding of national and international policies relevant to food, nutrition and health.	**ACE2149, ACE2141, ACE2148, ACE2156, ACE3183, ACE3184**
A5	An appreciation of recent developments in science relating particularly to the interactions between genetic inheritance and environmental factors, including diet, which influence the risk of common non-communicable diseases.	**ACE2112, ACE2137, ACE3183, ACE3190**
A6	An understanding of the scientific, societal and environmental contexts in which decisions about the application of scientific developments relevant to food and human nutrition are taken.	**ACE2148, ACE2149, ACE3183, ACE3184, ACE3186, ACE2151**
B1	Develop hypotheses and design, execute and analyse data for a range of study types including laboratory-based, clinical and nutritional epidemiological studies.	**ACE2137, ACE2138, ACE2140, ACE2141, ACE2156, ACE3163, ACE3190**
B2	Use statistical procedures to facilitate the design of studies and the analysis of collected data.	**ACE2136, ACE2137, ACE2156, ACE2158, ACE3190,**
B3	Demonstrate skills in a range of quantitative and qualitative techniques used in the area of food, human nutrition and consumer research.	**ACE2137, ACE2138, ACE2140, ACE2141, ACE2156, ACE2158, ACE3190**
B4	Critically evaluate data from a variety of sources.	**ACE2146, ACE2148, ACE2149, ACE2156 ACE3154, ACE3163,**

		ACE3168, ACE3168, ACE3173, ACE3184, ACE3186, ACE3190, ACE2151, ACE3183
B5	Present data in written format according to accepted scientific conventions.	**ACE2137, ACE2138, ACE2140, ACE2141, ACE2148, ACE2149, ACE2156, ACE3154, ACE3162, ACE3163, ACE3173, ACE3184, ACE3190, ACE2151, ACE3183**
C1	Critically analyse information and arguments derived from a range of sources .	**ACE2148, ACE2149, ACE2156, ACE2158, ACE3154, ACE3162, ACE3163, ACE3173, ACE3183, ACE3184, ACE3186, ACE3190**
C2	Interpret scientific information, both quantitative and qualitative.	**ACE2136, ACE2137, ACE2138, ACE2140, ACE2141, ACE2149, ACE2156, ACE3154, ACE3162, ACE3163, ACE3173, ACE3184, ACE3186, ACE3190, ACE3183, ACE2151**
C3	Derive and recognise hypotheses based on existing knowledge; to advance logical arguments, based on new or existing scientific evidence, to support or refute hypotheses; identify gaps in knowledge and propose means for filling them.	**ACE2137, ACE2138, ACE2140, ACE2148, ACE2149, ACE2156, ACE2158, ACE3154, ACE3162, ACE3173, ACE3183, ACE3184, ACE3186, ACE3190**
C4	Produce rational analyses of complex problems, in particular, those involving the application of scientific advances in the areas of food, nutrition and consumer behaviour.	**ACE3154, ACE3162, ACE3163, ACE3173, ACE3183, ACE3184, ACE3186, ACE3190**
D1	Communicate clearly and effectively through written documents and oral presentations in ways that are appropriate to the target audience.	**ACE2137, ACE2138, ACE2140, ACE2141, ACE2148, ACE2149, ACE2151, ACE2156, ACE3154, ACE3162, ACE3163, ACE3183, ACE3184, ACE3186, ACE3190**
D2	Make effective use of library and other sources of information.	**ACE2112 ACE2136, ACE2137, ACE2138,**

		ACE2140, ACE2141, ACE2148, ACE2149, ACE2156, ACE2158, ACE3151, ACE3152, ACE3153, ACE3154, ACE3162, ACE3163, ACE3173, ACE3174, ACE3183, ACE3190, ACE2151
D3	Make effective use of communication and information technology.	**ACE2136, ACE2138, ACE2148, ACE2149, ACE2158, ACE3151, ACE3154, ACE3162, ACE3163, ACE3173, ACE3183, ACE3186, ACE3190, ACE2151**
D4	Plan, organise and prioritise work effectively to meet deadlines.	**ACE2137, ACE2138, ACE2140, ACE2148, ACE2149, ACE2156 ACE3151, ACE3153, ACE3154, ACE3173, ACE3184, ACE3190**
D5	Work independently and as part of a team.	**ACE2137, ACE2138, ACE2140, ACE2141, ACE2148, ACE2149, ACE2156, ACE3151, ACE3153, ACE3154, ACE3162, ACE3173, ACE3184, ACE3190**
D6	Demonstrate problem solving skills and initiative	**ACE2112, ACE2137, ACE3190**
D7	Research employment opportunities, to prepare and submit effective applications for employment and to gain skills in effective presentations at interview.	**Tutorial support**
D8	Produce a development plan to help overcome identified skills weaknesses.	**Tutorial support**