Programme Specification

Master of Neuroscience (4 years): 2018-19

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided.

Awarding Institution	University of Southampton
Teaching Institution	University of Southampton
Mode of Study	Full-time
Duration in Years	4 years, following standard progression for a full-time student
Accreditation details	Not applicable
Final award	Integrated Masters in Neuroscience
Name of award	Neuroscience
Interim Exit awards	Certificate in Higher Education Diploma in Higher Education Bachelor of Science (Ordinary) Bachelor of Science (Hons)
FHEQ level of final award	7
UCAS code	B140
QAA Subject Benchmark or other external reference	QAA Subject Benchmark Statement for Biomedical Science (2007), QAA: Master's degree characteristics (2010) QAA Framework for Higher Education Qualifications (FHEQ)
Programme Coordinator	Dr Neil Smyth and Dr Katrin Deinhardt
Date specification was written	20 October 2014
Date specification was validated	23 January 2015
Date specification was last updated	July 2017

Programme Overview

Brief outline of the programme

The programme builds on the existing Biomedical Sciences BSc programmes with their well-established neuroscience content that allows progressive specialisation in the field. The MNeuroscience degree will offer a balanced programme where students will gain the relevant skills and knowledge required for a career in Neuroscience. Students will be taught through a combination of lectures, tutorials, practical classes, coursework and research based projects.

In Part 3 students will undertake a research project either independently or as part of a group. In Part 4 students will undertake an individual extended research-based project, a library-based dissertation and prepare a series of critiques on research seminars attended. In addition, students will study the subject area of one lectured module in depth, developing critical assessment of research papers, and synthesis through the writing an overview of one aspect of the field. A key component will be a new "Advanced Neuroscience" module in which the students will guided through the underpinnings of neuroscience research projects currently being undertaken. Throughout the programme, students will undertake independent reading both to supplement and consolidate the taught material and to broaden their knowledge and understanding of neuroscience.

Learning and Teaching
Eight modular units are taken each academic year, four in semester one and four in semester two. A lectured unit normally consists of two lectures a week plus a three-hour practical on alternate weeks. Practicals and other components of in-course assessment make up 25% of the final mark for years one to three. In year four the project makes up 50% of the overall mark and there are continuous assessment elements in each of the other modules. Workshops and pastoral tutorials are also provided in which

students can get specific help on the content of modules. Each week of years one and two students therefore attend eight 45-minute lectures, an average of two 2 to 3 hour practical classes and may also attend a small group tutorial, which should take up to two hours to prepare. In year three the research projects replace the practical classes, and year four is dominated by the research project and guided study. These advanced studies will be supplemented by extended workshop formats involving interactions between small groups of students and academics.

Assessment
Examinations are held in the two weeks after each semester, in January and June. Part I work shall be excluded from the final degree classification. A weighting of 0:1:2 shall be used for the three parts of an Honours degree programme, and a weighting of 0:1:2:2 for the four parts shall be used to calculate the exit grade for the MNeuroscience programme.

Please note: As a research-led University, we undertake a continuous review of our programmes to ensure quality enhancement and to manage our resources. As a result, this programme may be revised during a student's period of registration, however, any revision will be balanced against the requirement that the student should receive the educational service expected. Please read our Disclaimer to see why, when and how changes may be made to a student's programme.

Programmes and major changes to programmes are approved through the University's programme validation process which is described in the University's Quality handbook.

Educational Aims of the Programme

Neuroscience is the study of all aspects of the nervous system, from the molecular to behavioural level, and is addressed in the context of the physiology and pathology of the whole organism. Graduates in Neuroscience are needed to help address key challenges for society such as neurological and psychological conditions, as well as to improve fundamental understanding of brain function. Graduates are also well qualified to go on to a variety of areas of employment. In Southampton you will undertake a balanced programme where you will gain the relevant skills and knowledge required for a career in this subject area.

The aims of the programme are to provide you with:

1. a stimulating, informed environment through a wide range of interesting and contemporary courses with flexibility and choice, but allowing you to focus increasingly as you progress through each part of your degree;
2. a sound scientific knowledge base in Neuroscience;
3. the ability to describe and comment on specific aspects of current research in Neuroscience;
4. an appreciation of the limits of our current understanding of Neuroscience and how these may be advanced by further relevant research;
5. an opportunity to develop a range of transferable skills (information and communication technology, team working, written and oral communication, time management, planning, data collection and presentation);
6. opportunities to develop your skills of critical thinking and to show that you can pursue independent study;
7. an opportunity to undertake independent projects on a Neuroscience topic, including the possibility of two in an academic research laboratory;
8. an education and training suitable for a wide variety of careers and that will prepare you for higher degrees and careers in Neuroscience research;
9. the capability of life-long learning, study and enquiry.

Programme Learning Outcomes

Knowledge and Understanding

Having successfully completed this programme you will be able to demonstrate critical awareness of current issues in Neuroscience in the context of the biomedical sciences, and comprehensive knowledge and systematic understanding of:

Neuroscience

1. the principles of neurophysiology
2. synaptic biophysics, transmission-excitation and inhibition
3. cell-cell communication in the nervous system
4. neuroanatomy and cellular morphology
5. autonomic nervous system
6. spinal reflexes, motor control and movement disorders
7. sensory systems and special senses
8. electroencephalogram, electro-oculogram and psychogalvanic-skin-response
9. principle neurotransmitter systems of the nervous system
10. pharmacological manipulation of neurotransmitter pathways
11. structure and function of voltage gated channels and neurotransmitter receptors
12. learning and memory
13. the intracellular signalling pathways, and how cell surface receptors activate major signalling pathways and how these pathways are modified in disease states
14. axonal and dendritic transport/ the mechanisms of protein targeting within neural cells
15. epilepsy and the control of excitability
16. axonal pathway development,;
17. axonal targeting and pathologies
18. network signalling and behaviour
19. neurological disease mechanisms- neurodegeneration- synaptopathies- aberrant protein processing, amyloid and prions

Physiology

1. the principal functions of the major organs in the body
2. the principles of homeostasis
3. the respiratory and cardiovascular systems
4. muscles and the control of muscle contraction
5. the transport of molecules across biological membranes
6. the mechanism of cell communication -autocrine, paracrine, endocrine and nervous systems
7. hormones and their importance in physiological processes
8. the cellular interactions which underlie the immune response in normal and pathophysiology
9. the mechanisms of protein targeting within cells and role played by tyrosine kinase receptor cascades and oncogenes in normal and aberrant cell signalling

Cell Biology

10. composition and spatial organisation of the major organelle systems in cells
11. mitosis, meiosis and cell division
12. genetic inheritance and transmission
13. cell determination and differentiation
14. the structure and function of the cytoskeleton

Biochemistry

15. how genetic information is stored in DNA, how DNA is replicated the processes of transcription and translation
16. genome and proteome projects and their impact on biotechnology and medicine
17. the basis of DNA technology including genetic engineering and gene therapy
18. strategies used in the production and use of antibodies for human therapy
19. the pathways involved in the metabolism of carbohydrates, fats and proteins

20. how the various metabolic pathways are integrated in the body.
21. the structure and function of biologically important molecules
22. the properties of enzymes
23. the role of metabolic pathways in the production of energy and intermediates for cell life and growth
24. the techniques used to determine the structure,interactions and function of macromolecules
25. the structure and function of membrane proteins - the molecular basis for cellular communication

Teaching and Learning Methods
You will be taught through a combination of lectures, tutorials, practical classes, coursework and projects. In Part 3 you will undertake a research project either independently or as part of a group. In Part 4 you will undertake an individual extended research-based project, a library-based dissertation and prepare a series of critiques on research seminars attended. In addition, you will study one lectured module in depth, allowing you to critically assess research papers and write an overview of one aspect of the field. A key component will be a new "Advanced Neuroscience" module in which you will guided through the underpinnings of neuroscience research projects currently being undertaken. Throughout the programme you will undertake independent reading both to supplement and consolidate the taught material and to broaden your knowledge and understanding of Neuroscience.

Assessment methods
You are assessed by a combination of continuous assessment and written examinations at the end of each semester to test your knowledge and understanding of the lecture and tutorial material. Continuous assessment is based on performance in tutorials, practicals and projects including dissertations and presentations

Subject Specific Intellectual and Research Skills

Having successfully completed this programme you will be able to:

1. formulate and test hypotheses by planning, conducting and reporting a significant programme of neuroscience research
2. use a range of neuroscience laboratory equipment to conduct experiments
3. use computer software to record and analyse neuroscience data and determine their importance and validity
4. analyse critically and solve complex neuroscience problems
5. integrate your neuroscience knowledge base with other selected disciplines such as physiology, biology, pharmacology or biochemistry
6. independently integrate and critically evaluate neuroscience data from a wide range of sources, including primary source material in neuroscience journals and experimentation
7. demonstrate a systematic understanding of how the boundaries of neuroscience knowledge are advanced through research
8. conduct risk assessments concerning the use of chemicals, animal material and laboratory procedures
9. demonstrate broad expertise in defined areas of neuroscience at the level of current research in the field
10. critically evaluate the data and methodology of current published research in neuroscience and present your conclusions.

Teaching and Learning Methods
In addition to the methods described in the section above you will be supervised in practical classes and during both your part 3 and part 4 projects. As part of your final year programme you will be guided in critically reviewing topics using primary source literature.

Assessment methods
Your subject specific skills will be assessed as described in the section above. Experimental and research skills are assessed through an appropriate combination of laboratory reports, project reports and presentations.

Transferable and Generic Skills

The transferable skills you will develop during your degree are those that will improve your employability and will be of use to you in your future career.
Having successfully completed this programme you will be able to:

1. communicate/present effectively both verbally and in writing on a range of Neuroscience topics to both specialised and non-specialised audiences
2. work with, and within, a group towards defined outcomes
3. use information technology and other resources to find, extract and synthesise information
4. solve problems relating to qualitative and quantitative information
5. learn independently through critical enquiry
6. demonstrate you have the ability to undertake appropriate further training
7. manage resources and time
8. demonstrate competency in using laboratory skills in a safe and responsible manner.

Teaching and Learning Methods
You will be helped to acquire these skills through aspects of the formal teaching programme. In the early years this will mainly be through tutorial and coursework, whilst in parts 3 and 4 your project work will give you ample opportunity to further develop and practise many of the individual skills.

Assessment methods
Your skills will be assessed as described in the section above, primarily through continuous assessment and through your year 3 and year 4 projects.

Graduate Attributes

Graduate Attributes are the personal qualities, skills and understanding you can develop during your studies. They include but extend beyond your knowledge of an academic discipline and its technical proficiencies. Graduate Attributes are important because they equip you for the challenge of contributing to your chosen profession and may enable you to take a leading role in shaping the society in which you live.

We offer you the opportunity to develop these attributes through your successful engagement with the learning and teaching of your programme and your active participation in University life. The skills, knowledge and personal qualities that underpin the Graduate Attributes are supported by your discipline. As such, each attribute is enriched, made distinct and expressed through the variety of learning experiences you will experience. Your development of Graduate Attributes presumes basic competencies on entry to the University.

Programme Structure

Typical course content

In part 1, there are a number of core and compulsory modules, which lay a solid foundation in the basic discipline of this programme. A compulsory module is one that you must take (but need not pass) whilst a core module is one that you must take and pass to progress to the next level of study. More specialised training and options that enable diversification commence in Part 2. There is also an opportunity in semester 2 of Part 2 to take modules from the University's Curriculum Innovation Programme (CIP).

In Part 3 the students are exposed to the forefronts of the discipline's knowledge, with the opportunity to conduct supervised original research.

The four-year programme is intended to develop research skills in a more inter-disciplinary context than is possible in a three-year degree structure. You will also be exposed to cutting edge research, participating in seminar presentations in wide-ranging and specialist topics.

More detailed information of the subject combinations and the modules taken in each year can be found in Appendix 2.

Special Features of the programme

The Masters in Neuroscience provides a flexible programme with which to pursue your interest in Neuroscience to the frontiers of our knowledge in this discipline. Parts 1 and 2 provide you with a solid foundation in Neuroscience and important related disciplines needed to put the specific information in context. You will also develop a solid foundation in laboratory skills. In Part 3 you will have the opportunity to develop your own interests in particular fields of neuroscience research supported by a range of advanced Part 3 courses. These courses are taught by researchers at the forefront of their disciplines from within the Centre and from the wider university, including the faculty of Medicine and Institute of Life Sciences. There is also the opportunity to conduct an original research project. The analytical skills acquired will be further honed in Part 4 where you have the opportunity to undertake an extended research projects in the Centres own research laboratories and attend modules which are research led, drawing extensively on research seminars given throughout the University. The analytical and practical skills acquired during this programme provide a strong foundation for a broad range of careers.

Programme details

Details of the Programme Structure may be found on the Academic Unit web site http://www.southampton.ac.uk/biosci/undergraduate/courses/master-of-neuroscience.page? (Where an indicative list of options can be found. We cannot guarantee to offer every option each year); in the Year Handbooks, http://www.southampton.ac.uk/studentservices/academic-life/faculty-handbooks.page and are briefly summarised below.

The MNeurosci programme is offered as a full-time course and normally lasts for four years.

Study is divided into four parts for the MNeurosci each part corresponding to one year of full-time study. The programme is delivered in a semester pattern, each semester having 12 weeks for teaching and learning and 2-3 weeks for examinations.

The programme is divided into individual study modules. Each study module is accredited as being worth a certain number of credit points to you on successful completion. Modules are normally worth 7.5 ECTS which is equivalent to 150 hours of study. Modules are generally assessed at the end of each semester, but some are assessed entirely by coursework throughout the duration of the module.
This is an indicative list of options/modules. We cannot guarantee to offer every option each year

Part 1(FHEQ Level 4)

The following modules are **core** (i.e. a minimum pass mark of 40% is required) and must be taken:

Module	ECTS
BIOL1007 Macromolecules of Life	7.5
BIOL1008 Metabolism and Metabolic Disorders	7.5
BIOL1011 Systems Physiology	7.5
BIOL1013 Integrative Mammalian Physiology	7.5

The following modules are compulsory (i.e. a minimum pass mark of 25% is required) and must be taken:

Module	ECTS
BIOL1006 Cell Biology and Genetics	7.5
BIOL1020 Core Skills in the Life Sciences	7.5
CHEM1039 Biological Chemistry	7.5
BIOL1021 Behaviour of Biomolecules	7.5

End of Part 1 Pass: Student can Exit with award of Certificate of Higher Education

Part 2 (FHEQ Level 5)

The following modules are **core** (i.e. a minimum pass mark of 40% is required) and must be taken:

Module	ECTS
BIOL2014 Neuroscience	7.5
BIOL2022 Immunology, Infection and Inflammation	7.5
~~BIOL2046 Quantitative Skills for Biomed Biomedical Sciences.~~	~~7.5~~

Commented [A1]: Compulsory, not core – double-check

The following modules are compulsory (i.e. a minimum pass mark of 25% is required) and must be taken:

Module	ECTS
BIOL2016 Pharmacology A	7.5
BIOL2010 Flow of Genetic Information	7.5
BIOL2011 Molecular and Cellular Biochemistry:	7.5
BIOL2046 Quantitative Skills for Biomedical Sciences.	7.5

Students must choose AT LEAST one of the two below modules:

Module	ECTS
BIOL2017 Pharmacology B – Highly Recommended	7.5
BIOL2040 Neural Basis of Behaviour~~/ BIOL2017 Pharmacology B~~	7.5

If only one module was selected from the above, then one further module (7.5 ECTS) must be chosen from optional modules.

At the end of Part 2 it is possible to spend a year in industry. Students normally apply for this during semester one of Part 2. This provides an opportunity for you to experience working in a modern industrial laboratory and to improve your practical laboratory skills. If you follow this option your studies will be suspended for the duration of your time spent in industry as it is not part of your programme of study. You will find, however, that this experience will assist your understanding of the more academic parts of your degree programme.

End of Part 2 Pass: Student can Exit with award of Diploma of Higher Education

To progress to part 3, students must achieve an aggregate mark of at least 60% at the end of Part 2

Part 3 (FHEQ Level 6)

A compulsory 15 ECTS of independent study is required. You have a choice of two options:

Option A - BIOL3034 In-depth Research Project (15 ECTS)

OR

Option B - BIOL3069 In silico research project (15 ECTS)

Commented [A2]: corrected project options

You will take the following TWO compulsory modules (15 ECTS):

Module	ECTS
BIOL3021 Cellular and Molecular Neuroscience	7.5
BIOL3025 Neuropharmacology of CNS disorders	7.5

Must select ~~two~~ TWO of the ~~three~~ THREE modules below (15ECTS):

Commented [A3]: Now for 2019_20could simplify this to specify x3 Neuro modules - Further could make one set of x5 compulsory modules

Module	ECTS
BIOL 3018 Molecular Pharmacology	7.5
BIOL 3020 Systems Neuroscience	7.5
BIOL 3048 Neurodegenerative Disease	7.5

Also m~~M~~ust choose one of the below:

Module	ECTS
BIOL3017 The Molecular and Structural Basis of Disease	7.5
BIOL3022 Cell Signalling in Health and Disease	7.5

Also must choose ONE further optional module (7.5 ECTS) in Semester1 ~~chosen~~ from the following:

[If you wish to select a module not listed here please contact your tutor]

Module	ECTS
BIOL3001 Current Topics in Cell Biology	7.5
BIOL3012 Cell Membranes	7.5
BIOL3014 Molecular Cell Biology	7.5
BIOL3015 Regulation of Gene Expression	7.5
BIOL3027 Selective Toxicity	7.5
BIOL3037 Immunology	7.5
BIOL3043 Cellular and Molecular Pathology	7.5
BIOL3054 Nutrition in Health & Disease: Part 1	7.5
BIOL3063 Bioinformatics and Systems Biology	7.5

End of Part 3: Student who has not met the requirements to progress or graduate at Honours Degree level (at least 180 ECTS) can Exit with award of Bachelor of Science (ordinary) (at least 150 ECTS)

End of Part 3 Pass at Honours Degree level (at least 180 ECTS): Student can Exit with award of Bachelor of Science (Honours)

Part 4 (FHEQ Level 7)

The following modules (total 52.5 ECTS) are compulsory (i.e. a minimum pass mark of 25%) and must be taken:

Module	ECTS
BIOL6084 Advanced Neuroscience.	15
BIOL6078 Structure & Function of the Nervous System.	7.5
BIOL6013 Advanced Research Project	30

ONE further module (7.5 ECTS) chosen from the following to cover ALL required Neuroscience modules (The below are highly recommended, however if you wish to choose a module not listed please speak with your personal tutor):

Module	ECTS
BIOL6034 Systems Neuroscience	7.5
BIOL6045 Neurodegenerative Disease	7.5
BIOL6022 Molecular Pharmacology	7.5
BIOL6079 Glial Development and Biology	7.5
BIOL6080 Synaptic Function in Health and Disease	7.5

Commented [A4]: If make first x3 compulsory in yr3 then can select from 6079/6080 as newer fully level7 modules

Overlapping Modules: In selecting modules for Parts 3 and 4 you must note that you may not take overlapping modules at both Part 3 and Part 4 (FHEQ levels 6 & 7 respectively).

FHEQ level 7 Modules			FHEQ level 6 modules		sem
BIOL6021	Current Topics in Cell Biology		BIOL3001	Current Topics in Cell Biology	1
BIOL6022	Molecular Pharmacology		BIOL3018	Molecular Pharmacology	2
BIOL6023	Cellular Signalling in Health and Disease		BIOL3022	Cellular Signalling in Health and Disease	2
BIOL6024	Selective Toxicity		BIOL3027	Selective Toxicity	1
BIOL6025	Cellular & Genetic Aspects of Animal Development		BIOL3006	Cellular & Genetic Aspects of Animal Development	2
BIOL6027	Regulation of Gene Expression		BIOL3015	Regulation of Gene Expression	1
BIOL6030	Molecular Cell Biology		BIOL3014	Molecular Cell Biology	1
BIOL6031	Cell Membranes		BIOL3012	Cell Membranes	1
BIOL6032	Molecular Recognition		BIOL3013	Molecular Recognition	2
BIOL6033	Molecular Basis of Disease		BIOL3017	The Molecular and Structural Basis of Disease	2
BIOL6034	Systems Neuroscience		BIOL3020	Systems Neuroscience	2
BIOL6035	Cellular and Molecular neuroscience		BIOL3021	Cellular and Molecular neuroscience	1
Biol6036	Neuropharmacology of CNS Disorders		BIOL3025	Neuropharmacology of CNS Disorders	2
BIOL6037	Pathophysiology of the lung		BIOL3026	Pathophysiology of the lung	1
BIOL6038	Immunology		BIOL3037	Immunology	1
BIOL6039	Cellular and Molecular Pathology		BIOL3043	Cellular and Molecular Pathology	1
BIOL6040	Maternal, Fetal and Neonatal Physiology		BIOL3044	Maternal, Fetal and Neonatal Physiology	2
BIOL6041	Biomedical Technology		BIOL3052	Biomedical Technology	2
BIOL6042	Nutrition in Health and Disease: Part 1		BIOL3054	Nutrition in Health and Disease: Part 1	1
BIOL6043	Nutrition in Health and Disease: Part 2		BIOL3055	Nutrition in Health and Disease: Part 2	2
BIOL6045	Neurodegenerative Disease		BIOL3048	Neurodegenerative Disease	2
BIOL6047	Biofilms and Microbial Communities		BIOL3057	Biofilms and Microbial Communities	2

End of Part 4 Pass: Conferment of the award of Master of Neuroscience (Honours)

Support for Students with Additional Requirements

We will take a flexible and inclusive approach to enable those students with additional requirements to access the curriculum and achieve the intended learning outcomes of their programme. We will do this by working with you and the University's Enabling Services to assess your individual requirements.

Progression Requirements

The University regulations governing progression, determination and classification of results in general can be found in the University Calendar (Section IV – General Regulations) http://www.calendar.soton.ac.uk/sectionIV/progression-regs.html.

Those specific to the Faculty and your programme are in the University Calendar http://www.calendar.soton.ac.uk For progression on to Part 3, a minimum of 60% must be obtained at the end of Part 2.

Intermediate exit points

You will be eligible for an interim exit award if you complete part of the programme but not all of it, as follows:

Qualification	FHEQ level	Minimum overall credit in ECTS credits	Minimum ECTS credits required at level of award
Honours degree	6	at least 180	45
Ordinary degree	6	at least 150	30
Diploma of Higher Education	5	at least 120	45
Certificate of Higher Education	4	at least 60	45

Learning outcomes specific to each intermediate exit point correspond to a sub-set of those for the programme as a whole and may be determined by consulting the module map at the end of this document.

Support for student learning

There are facilities and services to support your learning some of which are accessible to students across the University and some of which will be geared more particularly to students in your particular Faculty or discipline area.

The University provides:

- library resources, including e-books, on-line journals and databases, which are comprehensive and up-to-date together with assistance from Library staff to enable you to make the best use of these resources
- high speed access to online electronic learning resources on the Internet from dedicated PC Workstations onsite and from your own devices laptops, smartphones and tablet PCs via the Eduroam wireless network. There is a wide range of application software available from the Student Public Workstations.
- computer accounts which will connect you to a number of learning technologies for example, the Blackboard virtual learning environment (which facilitates online learning and access to specific learning resources)
- standard ICT tools such as Email, secure filestore and calendars.
- access to key information through the MySouthampton Student Mobile Portal which delivers timetables, Module information, Locations, Tutor details, Library account, bus timetables etc. while you are on the move.
- IT support through a comprehensive website, telephone and online ticketed support and a dedicated helpdesk in the Hartley Library.
- Enabling Services offering support services and resources via a triage model to access crisis management, mental health support and counselling.
- assessment and support (including specialist IT support) facilities if you have a disability, long term health problem or Specific Learning Difficulty (e.g. dyslexia);
- the Student Services Centre (SSC) to assist you with a range of general enquiries including financial matters, accommodation, exams, graduation, student visas, ID cards

- Career Destinations, advising on job search, applications, interviews, paid work, volunteering and internship opportunities and getting the most out of your extra-curricular activities alongside your degree programme when writing your CV
- Other support that includes health services (GPs), chaplaincy (for all faiths) and 'out of hours' support for students in Halls (18.00-08.00); a Centre for Language Study, providing assistance in the development of English language and study skills for non-native speakers.

The Students' Union provides

- an academic student representation system, consisting of Course Representatives, Academic Presidents, Faculty Officers and the Vice-President Education SUSU provides training and support for all these representatives, whose role is to represent students' views to the University.
- opportunities for extracurricular activities and volunteering
- an Advice Centre offering free and confidential advice including support if you need to make an academic appeal
- Support for student peer-to-peer groups, such as Nightline.

Associated with your programme you will be able to access:

- An induction programme at the start of the course, which will provide orientation, information on modules, courses, library and computer facilities.
- Handbooks, module handbooks and material on the web.
- Library and academic skill packages.
- Well-equipped laboratories.
- Academic and pastoral support from members of staff, including your personal tutor which will include scheduled meetings at appropriate occasions during the academic year.
- Access to all administrative and academic material on the CBS, Programme and individual module web sites and/or Blackboard (http://www.blackboard.soton.ac.uk).
- Access to all academic staff through an appointment system and e-mail.
- Access to administrative staff in the Faculty Student Offices during the normal working day.
- Feedback on assessment.

Methods for evaluating the quality of teaching and learning

You will have the opportunity to have your say on the quality of the programme in the following ways:

- Completing student evaluation questionnaires for each module of the programme
- Acting as a student representative on various committees, e.g. Staff: Student Liaison Committees, Faculty Programmes Committee, CfBS Education and Quality Committee OR providing comments to your student representative to feed back on your behalf.
- Serving as a student representative on Faculty Programmes Scrutiny Groups for programme validation
- Taking part in programme validation meetings by joining a panel of students to meet with the Faculty Programmes Scrutiny Group

The ways in which the quality of your programme is checked, both inside and outside the University, are:

- Regular module and programme reports which are monitored by the Faculty
- Programme validation, normally every five years.
- External examiners, who produce an annual report
- A national Research Assessment Exercise (our research activity contributes directly to the quality of your learning experience)
- Institutional Review by the Quality Assurance Agency

Criteria for admission

The University's Admissions Policy (see www.southampton.ac.uk/admissions-policy) applies equally to all programmes of study. The following are the typical entry criteria we use for selecting candidates for admission to our programmes.

Entry Requirements

These requirements are reviewed annually by our Admissions team. Those stated below were correct as of July 2015.

GCSEs:

We require Grades A-C in English, Mathematics and Science. If you lack these formal qualifications, your aptitude for the course will be assessed at interview. International students, whose first language is not English, must have already attained the necessary standard in English – see English Language Proficiency section below.

A Levels:

AAA-AAB Chemistry must be offered at A level (minimum grade B) with at least one other A level science subject. A level science subjects considered include biology, human biology, physics, mathematics, psychology, environmental studies, geography and geology. Exceptional candidates with only one science A level may be considered.

Alternative qualifications

Our admissions requirement is normally defined on the basis of A/AS levels, but equivalent qualifications are accepted.

We do offer entry through a one year Science Foundation programme designed to enable you to qualify for entry to Honours degree programmes in Biological Sciences if you have not studied the appropriate Science subjects at GCE A level or equivalent standard. It is particularly appropriate if you are a mature student or if you have obtained good grades in non-science A levels.

We will also accept applications from candidates offering other equivalent qualifications including Scottish and Irish Highers, European and International Baccalaureate, Access and Foundation courses and overseas qualifications.

More information on the entry requirements for Biology can be found on the Biology webpage here - http://www.southampton.ac.uk/undergraduate/courses/biology.shtml

English Language Proficiency

All programmes at the University of Southampton are taught and assessed in the medium of English (other than those in modern foreign languages). Therefore, all applicants must demonstrate they possess at least a minimum standard of English language proficiency. Our minimum standard entry requirements are an IELTS Band C, i.e.

Overall	Reading	Writing	Speaking	Listening
6.5	5.5	5.5	5.5	5.5

Information on all acceptable English Language Tests can be found on the University website: www.southampton.ac.uk/admissions-language

Recognition of Prior Learning (RPL)

The University has a Recognition of Prior Learning Policy. It may be possible to recognise formal credit for learning you have acquired in the past through formal study and/or through work and other life experiences. Your application will be considered on individual merit and you may be asked to attend an interview.

Mature applicants

Studying for a degree later in life can be extremely rewarding and mature students are often among our most successful.

If you are over 21 and feel you would benefit from degree-level studies, we can be more flexible about our entry requirements. For full-time courses, selectors will expect you to demonstrate your commitment by means of some recent serious study, for example, one or two A-level passes, successful completion of an Open University foundation course or an appropriate Access course. Your application will be considered on individual merit and you may be asked to attend an interview.

Another popular option is to follow a certificate or diploma programme. These are available on a part time basis and most can be taken in the evenings, enabling you to continue to earn an income while you are studying. You do

For further information, please contact our Admissions Team ugafnes@soton.ac.uk

Career Opportunities

- Neuroscience research
- Pharmaceutical industry
- Postgraduate research training
- Scientific officer in medical laboratories
- Teaching
- Legal profession
- Business management

External Examiners(s) for the programme

Dr Pauline Phelan
Dr Stuart Knight

Students must not contact External Examiner(s) directly, and external examiners have been advised to refer any such communications back to the University. Students should raise any general queries about the assessment and examination process for the programme with their Course Representative, for consideration through Staff: Student Liaison Committee in the first instance, and Student representatives on Staff: Student Liaison Committees will have the opportunity to consider external examiners' reports as part of the University's quality assurance process.

External examiners do not have a direct role in determining results for individual students, and students wishing to discuss their own performance in assessment should contact their personal tutor in the first instance.

Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if

s/he takes full advantage of the learning opportunities that are provided. More detailed information can be found in the programme handbook or online at http://www.southampton.ac.uk/biosci/undergraduate/courses.page?

Additional Costs

Students are responsible for meeting the cost of essential textbooks, and of producing such essays, assignments, laboratory reports and dissertations as are required to fulfil the academic requirements for each programme of study. In addition to this, students registered for this programme typically also have to pay for the items listed in the table below.

In some cases you'll be able to choose modules (which may have different costs associated with that module) which will change the overall cost of a programme to you. Details of such costs will be listed in the Module Profile. Please also ensure you read the section on additional costs in the University's Fees, Charges and Expenses Regulations in the University Calendar available at www.calendar.soton.ac.uk

Main Item	Sub-section	PROGRAMME SPECIFIC COSTS
Approved Calculators		Candidates may use calculators in the examination room only as specified by the University and as permitted by the rubric of individual examination papers. The University approved models are Casio FX-570 and Casio FX-85GT Plus. These may be purchased from any source and no longer need to carry the University logo.
Stationery		You will be expected to provide your own day-to-day stationary items, e.g. pens, pencils, notebooks, etc. Any specialist stationery items will be specified under the Additional Costs tab of the relevant module profile.
Textbooks		Where a module specifies core texts these should generally be available on the reserve list in the library. However due to demand, students may prefer to buy their own copies. These can be purchased from any source. Some modules suggest reading texts as **optional** background reading. The library may hold copies of such texts, or alternatively you may wish to purchase your own copies. Although not essential reading, you may benefit from the additional reading materials for the module.
Equipment and Materials	Laboratory Equipment and Materials:	All materials required for laboratory work are provided. Where necessary, suitable specialist safety equipment will be provided.
IT	Computer Discs or USB drives	Students are expected to provide their own portable data storage device.
	Software Licenses	All software is provided
	Hardware	It is advisable that students provide their own laptop or personal computer, although shared facilities are available across the University campus.

Main Item	Sub-section	PROGRAMME SPECIFIC COSTS
Clothing	Lab Coats and safety spectacles	One laboratory coat and a pair of safety spectacles are provided at the start of the programme to each student. If these are lost the student must replace them at their own expense. The Students Union Shop stock these items.
Printing and Photocopying Costs		Coursework such as essays; projects; dissertations may be submitted on line. In the majority of cases, though, students will be asked to provide a printed copy. The University printing costs are currently: A4 - 5p per side (black and white) or 25p per side (colour) A3 - 10p per side (black and white) or 50p per side (colour) Please Note: Paper sizes not recognised by the printing devices will prompt you to select the size and then charge a minimum of 50p per black and white copy and a maximum of £1 per colour copy. You can pay for your printing by using the money loaders or by using print copy payment service by going to www.printcopypayments.soton.ac.uk Please remember that we are unable to refund any credit that has not been used by the end of your course, so please consider this when topping up your printing/copy account Students entering Year 1 2015/16 will be given a printing allowance of £3 per 7.5 ECTS BIOL towards the costs of printing lecture handouts. Practical handouts and module guides will be provided by the university. The University Print Centre also offers a printing and copying service as well as a dissertation/binding service. Current printing and copying costs can be found here. They also provide a large format printing service, e.g. Academic posters. Details of current costs can be found here.
Placements (including Industrial Year out)		Students who choose to go on an industrial placement at the end of Part 2 can expect to cover costs for health and travel insurance, accommodation and living expenses; travel costs; visa costs. This will vary depending on which country you are travelling to.
Parking Costs		There may be a requirement to undertake work at Southampton General Hospital (SGH), for example during a final year research project. Students may need to cover costs for transport to travel to SGH or for car parking.