

## Programme Specification

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### MSci Neuroscience (2020-21)

Subject to revalidation

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
Accreditation details	None
Final award	Integrated Masters degree in Science
Name of award	Neuroscience
Interim Exit awards	Bachelor of Science with Honours (BSc (Hons)) Bachelor of Science (Ordinary) Certificate of Higher Education (CertHE) Diploma of Higher Education (DipHE)
FHEQ level of final award	Level 7
UCAS code	B140
Programme code	6147
QAA Subject Benchmark or other external reference	Biomedical Science 2007, Master's Degree Characteristics 2016
Programme Lead	John Chad (jchad)

### Programme Overview

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#### Brief outline of the programme

Understanding the human nervous system is one of science's greatest challenges, whilst the prevention of neurodegenerative conditions, such as Alzheimer's disease, is a massive challenge for society. To address these challenges we need highly motivated, well trained and talented neuroscientists.

Our four-year Integrated Masters degree programme builds on elements of the University of Southampton's successful and popular BSc Biomedical Sciences programme giving the necessary breadth across disciplines to

inform the specialist taught modules in neuroscience. The neuroscience modules cover all levels from the molecular to the behavioural, and are the foundation for independent research projects in Part 3 and 4. The programme is intended to provide a stepping stone to further study at PhD level in academic or clinical groups, and to important research career opportunities in the pharmaceutical and medical-device industries. Complementary to research career pathways, the programme also provides a strong foundation for roles in education and management.

Your contact hours will vary depending on your module/option choices. Full information about contact hours is provided in individual module profiles.

### **Learning and teaching**

Eight modules are taken each academic year, four in semester one and four in semester two. A lectured module 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 parts 1 to 3. In Part 4 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 part 1 and 2 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 part 3 the research projects replace the practical classes, and part 4 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. While marks for the first year do not count towards the final degree classification, you do have to gain an overall pass in your first year. To continue on the Masters program you must achieve an average mark of >60% in the second year. Currently the second year counts one fifth towards the final degree classification while the third and fourth years two fifths each.

## **Special Features of the programme**

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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 modules. These courses are taught by researchers at the forefront of their disciplines from within the School of Biological Sciences 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 School of Biological Sciences 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.

**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

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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

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### Knowledge and Understanding

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On successful completion of this programme you will have knowledge and understanding of:

- A1. Neuroscience the principles of neurophysiology
- A2. synaptic biophysics, transmission-excitation and inhibition
- A3. cell-cell communication in the nervous system
- A4. neuroanatomy and cellular morphology
- A5. autonomic nervous system
- A6. spinal reflexes, motor control and movement disorders
- A7. sensory systems and special senses
- A8. electroencephalogram, electro-oculogram and psychogalvanic-skin-response
- A9. principle neurotransmitter systems of the nervous system
- A10. pharmacological manipulation of neurotransmitter pathways
- A11. structure and function of voltage gated channels and neurotransmitter receptors
- A12. learning and memory

- A13. the intracellular signalling pathways, and how cell surface receptors activate major signalling pathways and how these pathways are modified in disease states
- A14. axonal and dendritic transport/ the mechanisms of protein targeting within neural cells
- A15. epilepsy and the control of excitability
- A16. axonal pathway development,;
- A17. axonal targeting and pathologies
- A18. network signalling and behaviour
- A19. neurological disease mechanisms- neurodegeneration- synaptopathies- aberrant protein processing, amyloid and prions
- A20. Physiology
  - the principal functions of the major organs in the body
- A21. the principles of homeostasis
- A22. the respiratory and cardiovascular systems
- A23. muscles and the control of muscle contraction
- A24. the transport of molecules across biological membranes
- A25. the mechanism of cell communication -autocrine, paracrine, endocrine and nervous systems
- A26. hormones and their importance in physiological processes
- A27. the cellular interactions which underlie the immune response in normal and pathophysiology
- A28. the mechanisms of protein targeting within cells and role played by tyrosine kinase receptor cascades and oncogenes in normal and aberrant cell signalling
- A29. Cell Biology
  - composition and spatial organisation of the major organelle systems in cells
- A30. mitosis, meiosis and cell division
- A31. genetic inheritance and transmission
- A32. cell determination and differentiation
- A33. the structure and function of the cytoskeleton
- A34. Biochemistry
  - how genetic information is stored in DNA, how DNA is replicated the processes of transcription and translation
- A35. genome and proteome projects and their impact on biotechnology and medicine
- A36. the basis of DNA technology including genetic engineering and gene therapy
- A37. strategies used in the production and use of antibodies for human therapy
- A38. the pathways involved in the metabolism of carbohydrates, fats and proteins
- A39. how the various metabolic pathways are integrated in the body.
- A40. the structure and function of biologically important molecules
- A41. the properties of enzymes
- A42. the role of metabolic pathways in the production of energy and intermediates for cell life and growth
- A43. the techniques used to determine the structure, interactions and function of macromolecules
- A44. 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 be 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

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On successful completion of this programme you will be able to:

- B1. formulate and test hypotheses by planning, conducting and reporting a significant programme of neuroscience research
- B2. use a range of neuroscience laboratory equipment to conduct experiments
- B3. use computer software to record and analyse neuroscience data and determine their importance and validity
- B4. analyse critically and solve complex neuroscience problems
- B5. integrate your neuroscience knowledge base with other selected disciplines such as physiology, biology, pharmacology or biochemistry
- B6. independently integrate and critically evaluate neuroscience data from a wide range of sources, including primary source material in neuroscience journals and experimentation
- B7. demonstrate a systematic understanding of how the boundaries of neuroscience knowledge are advanced through research
- B8. conduct risk assessments concerning the use of chemicals, animal material and laboratory procedures
- B9. demonstrate broad expertise in defined areas of neuroscience at the level of current research in the field
- B10. 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**

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On successful completion of this programme you will be able to:

- C1. communicate/present effectively both verbally and in writing on a range of Neuroscience topics to both specialised and non-specialised audiences
- C2. work with, and within, a group towards defined outcomes
- C3. use information technology and other resources to find, extract and synthesise information
- C4. solve problems relating to qualitative and quantitative information
- C5. learn independently through critical enquiry
- C6. demonstrate you have the ability to undertake appropriate further training
- C7. manage resources and time
- C8. 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 Part 3 and Part 4 projects.

## Programme Structure

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The programme structure table is below:

Information about pre and co-requisites is included in individual module profiles.

### Part I

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/student-services/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.

Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note in some instances modules have limited spaces available.

#### Part I Compulsory

Code	Module Title	ECTS	Type
BIOL1021	Behaviour of Biomolecules 2020-21	7.5	Compulsory
CHEM1039	Biological Chemistry 2020-21	7.5	Compulsory
BIOL1006	Cell Biology & Genetics 2020-21	7.5	Compulsory
BIOL1020	Core Skills in the Life Sciences 2020-21	7.5	Compulsory

#### Part I Core

Code	Module Title	ECTS	Type
BIOL1013	Integrative Mammalian Physiology 2020-21	7.5	Core
BIOL1007	Macromolecules of Life 2020-21	7.5	Core

BIOL1008	Metabolism & Metabolic Disorders 2020-21	7.5	Core
BIOL1011	Systems Physiology 2020-21	7.5	Core

## Part II

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.

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

Students who have 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 II Compulsory

Code	Module Title	ECTS	Type
BIOL2010	Flow of Genetic Information	7.5	Compulsory
BIOL2022	Immunology, Infection and Inflammation	7.5	Compulsory
BIOL2011	Molecular Cellular Biochemistry	7.5	Compulsory
BIOL2016	Pharmacology A	7.5	Compulsory
BIOL2046	Quantitative Skills for Biomedical Sciences	7.5	Compulsory

## Part II Core

Code	Module Title	ECTS	Type
BIOL2014	Neuroscience	7.5	Core



**Part II Optional**

Must choose 15 credits from the below (BIOL2017 is highly recommended).

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
BIOL2040	Neural Basis of Behaviour	7.5	Optional
BIOL2017	Pharmacology B	7.5	Optional

**Part II Optional.**

One further module (7.5 ECTS) to be chosen from optional modules.

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
BIOL2018	Adaptive Physiology	7.5	Optional
BIOL2013	Bioinformatics and DNA Technology	7.5	Optional
UOSM2001	Business Skills for Employability	7.5	Optional
PSYC2025	Cognitive Neuroscience	7.5	Optional
UOSM2026	Ethics in Science, Engineering and Technology: Jekyll and Hyde	7.5	Optional
PSYC2021	Language and Memory	7.5	Optional
BIOL2044	Medical Microbiology	7.5	Optional
SOES1009	The Living Earth	7.5	Optional
BIOL2045	Vertebrate Development	7.5	Optional

### Part III Compulsory

Must take the below two compulsory modules:

Project modules to a total of 30credits will be allocated by a separate process based on expressed preferences and results to-date.

Code	Module Title	ECTS	Type
BIOL3021	Cellular and Molecular Neuroscience	7.5	Compulsory
BIOL3025	Neuropharmacology of CNS Disorders	7.5	Compulsory

### Part III Optional

Must choose two from the below.

Code	Module Title	ECTS	Type
BIOL3018	Molecular Pharmacology	7.5	Optional
BIOL3048	Neurodegenerative Disease	7.5	Optional
BIOL3020	Systems Neuroscience	7.5	Optional

Please select one of the following:

BIOL3022	Cell Signalling in Health and Disease	7.5	Optional
BIOL3017	Molecular and Structural Basis of Disease	7.5	Optional

Please select one of the following:

If you wish to select a module not listed here, please contact your tutor to discuss.

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
BIOL3063	Bioinformatics and Systems Biology	7.5	Optional
BIOL3012	Cell Membranes	7.5	Optional
BIOL3043	Cellular and Molecular Pathology	7.5	Optional
BIOL3001	Current Topics in Cell and Developmental Biology	7.5	Optional
BIOL3037	Immunology	7.5	Optional
BIOL3014	Molecular Cell Biology	7.5	Optional
BIOL3054	Nutrition in Health and Disease: Part1	7.5	Optional
BIOL3015	Regulation of Gene Expression	7.5	Optional
BIOL3027	Selective Toxicity	7.5	Optional

#### **Part IV**

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).

#### **Part IV Compulsory**

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
BIOL6013	Advanced Research Project	30	Compulsory
BIOL6078	Structure and Function of the Nervous System	7.5	Compulsory
BIOL6084	Advanced Neuroscience	15	Compulsory

#### **Part IV Optional**

Must take a maximum of one module from those listed below.

<b>Code</b>	<b>Module Title</b>	<b>ECTS</b>	<b>Type</b>
BIOL6022	Molecular Pharmacology	7.5	Optional

BIOL6045	Neurodegenerative Disease	7.5	Optional
BIOL6080	Synaptic Function in Health and Disease	7.5	Optional
BIOL6034	Systems Neuroscience	7.5	Optional

## Progression Requirements

The programme follows the University's regulations for [\*Progression, Determination and Classification of Results : Undergraduate and Integrated Masters Programmes\*](#) and [\*Progression, Determination and Classification of Results: Postgraduate Master's Programmes\*](#) as set out in the University Calendar: <http://www.calendar.soton.ac.uk/sectionIV/sectIV-index.html>

## 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. Support includes daily Drop In at Highfield campus at 13.00 – 15.00 (Monday, Wednesday and Friday out of term-time) or via on-line chat on weekdays from 14.00 – 16.00. Arrangements can also be made for meetings via Skype.
- 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 and Employability services, 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 and in the local community, (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

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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 Education 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 Academic Scrutiny Groups for programme validation
- Taking part in programme validation meetings by joining a panel of students to meet with the Faculty Academic 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 School
- Programme validation, normally every five years.
- External examiners, who produce an annual report
- A national Research Excellence Framework (our research activity contributes directly to the quality of your learning experience)
- Institutional Review by the Quality Assurance Agency

Further details on the University's quality assurance processes are given in the [Quality Handbook](#).

## Career Opportunities

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

## External Examiner(s) for the programme

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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 Academic 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.

## Appendix 1:

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 also have to pay for:

### Additional Costs

Type	Details
Software Licenses	All software is provided
Clothing	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.
Parking costs (including on placements at hospitals)	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.
Hardware	It is advisable that students provide their own laptop or personal computer, although shared facilities are available across the University campus.
Computer discs or USB drives	Students are expected to provide their own portable data storage device.
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	<p>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.</p> <p>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.</p>
Laboratory Equipment and Materials	All materials required for laboratory work are provided. Where necessary, suitable specialist safety equipment will be provided.
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.
Printing and Photocopying Costs	<p>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 - 4p per side (black and white) or 18p per side (colour)            A3 - 8p per side (black and white) or 35p per side (colour)</p> <p>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.</p> <p>You can pay for your printing by using the money loaders or by using print copy payment service by going to <a href="http://www.printcoppayments.soton.ac.uk">www.printcoppayments.soton.ac.uk</a>            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</p> <p>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</p>

	found here. They also provide a large format printing service, e.g. Academic posters. Details of current costs can be found here.
Travel Costs for placements	<p>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.</p> <p>This will vary depending on which country you are travelling to.</p>

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](http://www.calendar.soton.ac.uk).