

Programme Specification

Biomedical Science (Integrated PhD) (2019-20)

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	Doctor of Philosophy (PhD)
Name of Award	Biomedical Science (Integrated PhD) Immunity and Infection Stem Cell Science The Cell Biology and Immunology of Cancer
Interim Exit awards	Master of Philosophy (MPhil) Master of Research (MRes)
FHEQ level of final award	Level 8
UCAS code	
Programme Code	7225
QAA Subject Benchmark or other external reference	
Programme Lead	Jane Collins (jec3)
Pathway Lead	

Programme Overview

Brief outline of the programme

The programme offers an opportunity to develop the advanced research and associated quantitative and bioinformatics skills required to become an independent researcher in biomedical sciences. The programme leads to a PhD in Biomedical Science in one of three pathways – the cell biology and immunology of cancer, immunity and infection or stem cell science. An interim award of MRes will be awarded to students completing the first year of the programme.

In the first year of the programme, students will undertake taught modules in research skills in biomedical sciences, quantitative cell biology and a specialist module related to one of three pathways. Students will also undertake three research projects to develop a broad range of laboratory skills and experience working in different research environments. In this first year students will develop core research skills including critical appraisal, scientific writing, written and oral presentation, statistical analysis and a range of key techniques used in biomedical research. In years 2-4 students will complete a focussed piece of research leading to a PhD.

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

In year one, a blend of learning and teaching methods are used in order to help students develop a broad range of skills. The Research Skills for Biomedical Science-1 (RSBS-1) module uses a combination of taught and practical sessions to introduce students to the core concepts underlying statistical analysis and study design supporting

students in handling their own data and critically appraising data. In RSBS-2 students will build on their learning in RSBS-1 and develop a research proposal for their substantive PhD project in years 2-4.

In the Quantitative Cell Biology module students are introduced to a range of techniques and core concepts through a series of facilitator-led workshops focussing on key technologies including genomics and genetic disease, bioinformatic analysis of "omic" datasets (RNAseq, microarray, proteome), high throughput and high content screening strategies and deriving clusters, networks, pathways and models from large datasets. Integral to these workshops will be a mix of facilitator and peer to peer learning sessions. This module will also be attended by students from Queen Mary University London (QMUL), who will be taught and assessed by the University of Southampton as part of the Medical Research Council Doctoral Training Partnership (MRC DTP) that exists between the two institutions.

In the pathway specific modules students will be asked to critically appraise research papers and develop the skills required to understand and critically interpret research findings, with the requirement for students to present their thoughts and participate in group discussions with both their peers and academic facilitators.

In the three research projects, students will be introduced to a range of laboratory skills gaining valuable practical experience of research methodology, experimental design, data interpretation and scientific writing. Students will also present work from one of their projects at a programme away day jointly held with our MRC DTP partner QMUL.

Assessment

Each module will be assessed as outlined in the individual module descriptions. Assessments include written assignments, oral presentations, group presentations, continual assessment, online project work including group focussed problem solving, progress interviews, and a thesis with a viva voce.

(<http://www.calendar.soton.ac.uk/sectionXI/medicine-iphd.html>).

Year 1:

The overall pass mark for each module is 50%. All modules (Quantitative Cell Biology, Research Skills for Biomedical Science, Research Project A, B & C and the pathway specific module) are core to the programme – as such all modules must be passed to be eligible for the MRes and no compensation of marks between modules will be permitted. Candidates who fail in any first year module at the first attempt will be permitted one attempt to resit all failed modules. Candidates who achieve at least 50% at the second attempt will be considered to have passed the module.

In accordance with the Regulations Governing Standalone Masters Programmes, the MRes degree will be classified as follows:

50-59% - Pass

60-69% - Merit

70% or more - Distinction

In addition to the MRes modules, candidates will have to demonstrate satisfactory performance in progress review meetings to progress to year 2. Progress reviews will be held after each of the three research projects and will be conducted by the Programme Pathway Director (or nominee) and one other member of academic staff. Students will need to demonstrate satisfactory engagement and understanding of the academic and practical aspects of their research project. Students will need to successfully complete Progress Review C and at least one of Progress Reviews A or B to be eligible for progress to year 2.

Students who have successfully completed the MRes in year 1 may exit the programme with their MRes award at any point after this award has been confirmed. Students who complete the MRes in Year 1 but do not pass 2 progress reviews (see above) will exit the programme at the end of year 1 with an MRes award.

Years 2-4

Students progressing into year 2 of the programme will begin a period of focussed research leading to PhD. Students who are recruited to the programme as part of the MRC DTP will have a co-supervisor in the partner Institution QMUL. This will give additional academic insight or training in practical elements, although these aspects will be formally assessed by the University of Southampton as part of the PhD thesis assessment procedures.

Every student will be required to undertake three Progression Reviews at fixed points during years 2-4. The second Progression Review is known as Confirmation. Two attempts at each review are permitted; failure to meet the criteria for a successful progression review will lead to termination of a student's candidature in line with the Procedures for Circumstances that may lead to Withdrawal or Termination. Details of the Progression Reviews are outlined in the Code of Practice for Research Candidature and Supervision (para 64-67) The policy and procedure for Confirmation of PhD status (Second Progression Review) is detailed in the Code of Practice for Research Candidature and Supervision (para 70-79).

By the end of year 4 students will submit a thesis of up to 75,000 words followed by a viva voce examination as outlined in the Code of Practice for Research Candidature and Supervision (para 83-103).

In line with the Regulations for Research Degrees, candidates unsuccessful at either the Confirmation or final PhD examination may be eligible to submit for an MPhil degree providing they are able to fulfil the learning objectives for MPhil as set out in the Code of Practice for Research Degree Candidature and Supervision (para7).

Special Features of the programme

The programme aims to provide advanced professional training leading to the appropriate practical and analytical skills required for you to pursue independent research in Biomedical Sciences. The programme will be intellectually led while paying close attention to practical training in statistics and quantitative core technologies. Students will be undertake their pathway specific taught module in the second semester and they will be given a choice of rotation projects within their pathway that will be updated during the academic year. The choice of rotations* allows students to network as a cohort, meet many scientists in the Medical and other Faculties and to tailor their training to meet the needs of the final 2-4 year PhD project.

In addition, students will have the opportunity to undertake further training in a wide range of innovative transferable skills, (for example media training or science policy courses) in order to prepare for a career as a professional research scientist in a variety of employment settings. All students will be encouraged to present their work at external national and international conferences.

*NB. Students will be given as much choice for their final 3 year PhD project as possible whilst keeping within the limits of sponsors' terms and conditions.

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

The aims of the programme are to:

- Enable competency in a broad range of state-of-the-art quantitative biomedical techniques in order to assimilate rapidly into the main project and to bring a mature perspective based on broad experimental experience.
- Provide advanced courses with which to develop knowledge and analytical skills in specific areas of Biomedical Sciences that are relevant to disease oriented research, and to use this knowledge to inform research projects*
- Make a unique and significant contribution to the knowledge and understanding of a chosen field.
- Undertake critical evaluation of current research, propose new hypotheses and evaluate methodologies.
- Encourage scrutiny and debate of issues related to research design, instrument selection and the evidence base for currently held ideas.
- Undertake research utilising current and novel methodological principles, which are appropriate to the advancement of scientific understanding and the promotion of new approaches to the treatment of disease and illness.
- To apply knowledge, analytical and critical thinking skills to develop sound judgements about data and to integrate research evidence into all aspects of model making and hypothesis building.
- Enable justification of scientific and professional decisions through critical evaluation and synthesis of relevant theories, empirical evidence and personal research experience.
- To present your own research findings, as well as those of others in a lucid and scholarly manner.

*NB. Students will be given as much choice for their final 3 year PhD project as possible whilst keeping within the limits of sponsors' terms and conditions.

Programme Learning Outcomes

Knowledge and Understanding

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

- A1. The practical issues involved in carrying out quantitative research
- A2. The value, nature, uses and limitations of a range of research methods
- A3. Research governance, ethics and data protection principles in scientific research
- A4. The identification and justification of the value of different sources of data in drawing conclusions from published literature
- A5. The genetic, cellular, molecular and immunological basis of mechanisms involved in the development of specific disease processes and how these may be adapted/regulated in disease management

Teaching and Learning Methods

Interactive lectures, practical workshops, student and tutor led seminars, journal club presentations, peer review, e-learning material, independent research, individual research supervision.

Assessment Methods

Literature reviews, research proposal, journal club presentations- critical discourses, online project work including group focussed problem solving, short research project reports, progress interviews, PhD thesis and viva.

Subject Specific Intellectual and Research Skills

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

- B1. Gather, quantify, analyse, synthesise, critically evaluate and interpret complex information
- B2. Apply scientific and clinical concepts to the development of new ideas and the synthesis of hypotheses
- B3. Analyse problems objectively using key theoretical perspectives and empirical research
- B4. Devise valid and reliable methods and instruments for data and information collection in relation to your own research
- B5. Demonstrate and exercise independence of mind and thought
- B6. Defend your research findings in the context of already published work and established paradigms

Teaching and Learning Methods

Interactive lectures, practical workshops, student and tutor led seminars, journal club presentations, peer review, e-learning material, independent research, individual research supervision

Assessment Methods

Literature reviews, research proposal, journal club presentations- critical discourses, short research project reports, progress interviews, PhD thesis and viva.

Transferable and Generic Skills

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

- C1. Work effectively, independently and with others in groups to achieve identified tasks
- C2. Identify your personal learning needs effectively and develop personal development plans appropriate to your career aspirations
- C3. Use information technology e.g. web/internet, databases, spreadsheets, statistical packages and word processing effectively
- C4. Present, discuss and defend ideas, concepts and views effectively through written and spoken language
- C5. Manage a research project with due attention to time and resource management

Teaching and Learning Methods

Interactive lectures, practical workshops, student and tutor led seminars, journal club presentations, peer review, e-learning material, independent research, individual research supervision

Assessment Methods

Literature reviews, research proposal, journal club presentations- critical discourses, online project work including group focussed problem solving, short research project reports, progress interviews, PhD thesis and viva

Subject Specific Practical Skills

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

- D1. Analyse and reflect critically on your professional role in your area of research
- D2. Apply investigative skills/methods of enquiry to researching problems and issues in your area of research

Learning Outcomes

LO1. The interim exit qualifications are MRes and MPhil degree. The learning outcomes for both degrees under this programme are as follows:

To be able to:

- Achieve competency in a broad range of state-of-the-art quantitative biomedical techniques
- Undertake critical evaluation of current research, propose new hypotheses and evaluate methodologies.
- Encourage scrutiny and debate of issues related to research design, instrument selection and the evidence base for currently held ideas.
- Undertake research utilising current and novel methodological principles, which are appropriate to the advancement of scientific understanding and the promotion of new approaches to the treatment of disease and illness.
- To apply knowledge, analytical and critical thinking skills to develop sound judgements about data and to integrate research evidence into all aspects of model making and hypothesis building.
- Enable justification of scientific and professional decisions through critical evaluation and synthesis of relevant theories, empirical evidence and personal research experience.
- To present your own research findings, as well as those of others in a lucid and scholarly manner

Programme Structure

The programme structure table is below:

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

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.

Immunity and Infection Pathway

Part I

The Integrated PhD in Biomedical Science Programme is offered in the following pathways:

1. The Cell Biology and Immunology of Cancer
2. Immunity and Infection
3. Stem Cell Science

The full programme for the Integrated PhD in Biomedical Science covers four years. The first year is modular in structure and leads to the qualification of Master of Research. Modules are either 10 or 20 ECTS credits at Level 7. Each module has its own aims, learning outcomes and assessment criteria. A total of 90 ECTS credits must be successfully completed during this year which will consist of the three Research project modules, the modules in Quantitative Cell Biology and Research Skills for Biomedical Science, and one of the discipline specific modules. Each of the three Research Project modules (A, B and C) will typically be performed with a different supervisor in a different research laboratory. In years two to four you will be expected to complete a 75,000 word thesis based on a three year research project normally with one of your supervisors from the three short research projects undertaken in Year 1.

The PhD in Biomedical Science is offered as a full-time course. It should be completed in a period of four years commencing in October of any given year. Should you fail any of the assessed modules of the first year modules you will be allowed one further attempt. You are required to pass all modules to gain the Master of Research award and to progress to the second year.

In year one, generic training in research skills and statistics' followed by an advanced course in quantitative bioinformatic analysis and computational modelling will allow you to evaluate, integrate, update and articulate knowledge at the cutting edge of your field. Study in specific disease oriented research will develop your understanding of the scientific basis of medicine in the context of the biology underpinning the system. Rotations through leading biomedical laboratories, to undertake specific projects will allow you to establish a broad base of technical expertise and experience of data generation, analysis and interpretation. In addition, these aspects of training in the first year will give you greater insight into different research areas prior to finalising your PhD project* and will facilitate rapid assimilation into your main project and bring to it a mature perspective and a broad range of experimental expertise. Years two to four consists of independent supervised research into a subject of your choice with the purpose of making a unique and significant contribution to knowledge and understanding, including the preparation and publication of research in peer reviewed journals.

The programme consists of a first year MRes with a 2-4 year PhD Programme.

On completion of MRes and successful completion of progress reviews students will enter Year 2. During Years 2-4 you will conduct your PhD research project under the supervision of a supervisory team. The programme will then follow the University's Higher Degree Regulations and Code of Practice for Research Candidature and Supervision as set out in the University Calendar.

Assessment methods

Assessment methods are designed to support students to meet the learning outcomes. Assessed study will include, journal club presentations, critical discourse, online project work including group focussed problem solving, short research project reports, literature reviews, research proposal, progress interviews, PhD thesis and viva voce. All these assessments have a defined marking scheme, known to students, with structured feedback and marks provided by teaching staff and given to students in a planned timeframe. The feedback and marking are moderated by Module Leaders and then cross-moderated across the Programme by independent members of postgraduate academic staff. Students are encouraged to contact teaching staff by email for additional feedback and help with academic issues. Language support is available for overseas

students. Disabled students will be empowered to participate equally on the Programme. Where any student has difficulty relating to disability or other challenging issues, Enabling Services will be contacted for advice and additional financial support sought from research councils or the University as appropriate. A dedicated Pastoral Adviser is identified for this Programme and students are advised of these services at Induction in October. Students are advised that all University Pastoral representatives are available to contact if they prefer and are also given information about all student support services in the university.

Part I Core

Code	Module Title	ECTS	Type
MEDI6038	Immunity & Infection 2019-20	10	Core
MEDI6227	Quantitative Cell Biology 2019-20	10	Core
MEDI6232	Research Skills for Biomedical Science 1 (RSBS 1) 2019-20	5	Core
MEDI6231	Research Skills for Biomedical Science 2 2019-20	5	Core
MEDI6033	Short Research Project A 2019-20	20	Core
MEDI6032	Short Research Project B 2019-20	20	Core
MEDI6036	Short Research Project C 2019-20	20	Core

The programme structure table is below:

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

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.

Stem Cell Science Pathway

Part I

The Integrated PhD in Biomedical Science Programme is offered in the following pathways:

1. The Cell Biology and Immunology of Cancer
2. Immunity and Infection
3. Stem Cell Science

The full programme for the Integrated PhD in Biomedical Science covers four years. The first year is modular in structure and leads to the qualification of Master of Research. Modules are either 10 or 20 ECTS credits at Level 7. Each module has its own aims, learning outcomes and assessment criteria. A total of 90 ECTS credits must be successfully completed during this year which will consist of the three Research project modules, the modules in Quantitative Cell Biology and Research Skills for Biomedical Science, and one of the discipline specific modules. Each of the three Research Project modules (A, B and C) will typically be performed with a different supervisor in a different research laboratory. In years two to four you will be expected to complete a 75,000 word thesis based on a three year research project normally with one of your supervisors from the three short research projects undertaken in Year 1.

The PhD in Biomedical Science is offered as a full-time course. It should be completed in a period of four years commencing in October of any given year. Should you fail any of the assessed modules of the first year modules you will be allowed one further attempt. You are required to pass all modules to gain the Master of Research award and to progress to the second year.

In year one, generic training in research skills and statistics' followed by an advanced course in quantitative bioinformatic analysis and computational modelling will allow you to evaluate, integrate, update and articulate knowledge at the cutting edge of your field. Study in specific disease oriented research will develop your understanding of the scientific basis of medicine in the context of the biology underpinning the system. Rotations through leading biomedical laboratories, to undertake specific projects will allow you to establish a broad base of technical expertise and experience of data generation, analysis and interpretation. In addition, these aspects of training in the first year will give you greater insight into different research areas prior to finalising your PhD project* and will facilitate rapid assimilation into your main project and bring to it a mature perspective and a broad range of experimental expertise. Years two to four consists of independent

supervised research into a subject of your choice with the purpose of making a unique and significant contribution to knowledge and understanding, including the preparation and publication of research in peer reviewed journals.

The programme consists of a first year MRes with a 2-4 year PhD Programme.

On completion of MRes and successful completion of progress reviews students will enter Year 2. During Years 2-4 you will conduct your PhD research project under the supervision of a supervisory team. The programme will then follow the University's Higher Degree Regulations and Code of Practice for Research Candidature and Supervision as set out in the University Calendar.

Assessment methods

Assessment methods are designed to support students to meet the learning outcomes. Assessed study will include, journal club presentations, critical discourse, online project work including group focussed problem solving, short research project reports, literature reviews, research proposal, progress interviews, PhD thesis and viva voce. All these assessments have a defined marking scheme, known to students, with structured feedback and marks provided by teaching staff and given to students in a planned timeframe. The feedback and marking are moderated by Module Leaders and then cross-moderated across the Programme by independent members of postgraduate academic staff. Students are encouraged to contact teaching staff by email for additional feedback and help with academic issues. Language support is available for overseas students. Disabled students will be empowered to participate equally on the Programme. Where any student has difficulty relating to disability or other challenging issues, Enabling Services will be contacted for advice and additional financial support sought from research councils or the University as appropriate. A dedicated Pastoral Adviser is identified for this Programme and students are advised of these services at Induction in October. Students are advised that all University Pastoral representatives are available to contact if they prefer and are also given information about all student support services in the university.

Part I Core

Code	Module Title	ECTS	Type
MEDI6227	Quantitative Cell Biology 2019-20	10	Core
MEDI6232	Research Skills for Biomedical Science 1 (RSBS 1) 2019-20	5	Core
MEDI6231	Research Skills for Biomedical Science 2 2019-20	5	Core
MEDI6033	Short Research Project A 2019-20	20	Core
MEDI6032	Short Research Project B 2019-20	20	Core
MEDI6036	Short Research Project C 2019-20	20	Core
MEDI6051	Stem Cell Biology 2019-20	10	Core

The programme structure table is below:

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

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.

The Cell Biology and Immunology of Cancer Pathway

Part I

The Integrated PhD in Biomedical Science Programme is offered in the following pathways:

1. The Cell Biology and Immunology of Cancer
2. Immunity and Infection
3. Stem Cell Science

The full programme for the Integrated PhD in Biomedical Science covers four years. The first year is modular in structure and leads to the qualification of Master of Research. Modules are either 10 or 20 ECTS credits at Level 7. Each module has its own aims, learning outcomes and assessment criteria. A total of 90 ECTS credits

must be successfully completed during this year which will consist of the three Research project modules, the modules in Quantitative Cell Biology and Research Skills for Biomedical Science, and one of the discipline specific modules. Each of the three Research Project modules (A, B and C) will typically be performed with a different supervisor in a different research laboratory. In years two to four you will be expected to complete a 75,000 word thesis based on a three year research project normally with one of your supervisors from the three short research projects undertaken in Year 1.

The PhD in Biomedical Science is offered as a full-time course. It should be completed in a period of four years commencing in October of any given year. Should you fail any of the assessed modules of the first year modules you will be allowed one further attempt. You are required to pass all modules to gain the Master of Research award and to progress to the second year.

In year one, generic training in research skills and statistics' followed by an advanced course in quantitative bioinformatic analysis and computational modelling will allow you to evaluate, integrate, update and articulate knowledge at the cutting edge of your field. Study in specific disease oriented research will develop your understanding of the scientific basis of medicine in the context of the biology underpinning the system. Rotations through leading biomedical laboratories, to undertake specific projects will allow you to establish a broad base of technical expertise and experience of data generation, analysis and interpretation. In addition, these aspects of training in the first year will give you greater insight into different research areas prior to finalising your PhD project* and will facilitate rapid assimilation into your main project and bring to it a mature perspective and a broad range of experimental expertise. Years two to four consists of independent supervised research into a subject of your choice with the purpose of making a unique and significant contribution to knowledge and understanding, including the preparation and publication of research in peer reviewed journals.

The programme consists of a first year MRes with a 2-4 year PhD Programme.

On completion of MRes and successful completion of progress reviews students will enter Year 2. During Years 2-4 you will conduct your PhD research project under the supervision of a supervisory team. The programme will then follow the University's Higher Degree Regulations and Code of Practice for Research Candidature and Supervision as set out in the University Calendar.

Assessment methods

Assessment methods are designed to support students to meet the learning outcomes. Assessed study will include, journal club presentations, critical discourse, online project work including group focussed problem solving, short research project reports, literature reviews, research proposal, progress interviews, PhD thesis and viva voce. All these assessments have a defined marking scheme, known to students, with structured feedback and marks provided by teaching staff and given to students in a planned timeframe. The feedback and marking are moderated by Module Leaders and then cross-moderated across the Programme by independent members of postgraduate academic staff. Students are encouraged to contact teaching staff by email for additional feedback and help with academic issues. Language support is available for overseas students. Disabled students will be empowered to participate equally on the Programme. Where any student has difficulty relating to disability or other challenging issues, Enabling Services will be contacted for advice and additional financial support sought from research councils or the University as appropriate. A dedicated Pastoral Adviser is identified for this Programme and students are advised of these services at Induction in October. Students are advised that all University Pastoral representatives are available to contact if they prefer and are also given information about all student support services in the university.

Part I Core

Code	Module Title	ECTS	Type
MEDI6035	Cancer Immunology 2019-20	10	Core
MEDI6227	Quantitative Cell Biology 2019-20	10	Core
MEDI6232	Research Skills for Biomedical Science 1 (RSBS 1) 2019-20	5	Core
MEDI6231	Research Skills for Biomedical Science 2 2019-20	5	Core
MEDI6033	Short Research Project A 2019-20	20	Core
MEDI6032	Short Research Project B 2019-20	20	Core

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:

- A dedicated Pastoral Adviser is identified for this Programme and students are advised of this at Induction in October. Students are advised that all University Pastoral representatives are available to contact if they prefer and are also given information about all student support services in the university, as above.
- Individual Pathway Directors will be support students with progress issues and decisions related to research options.
- Personal computing facilities (laptop or desktop computer)

- Transferable and research skills training from the Faculty (PGR training programme, transferable skills programme) and University Doctoral College).

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 OR providing comments to your student representative to feedback on your behalf.
- Serving as a student representative on Faculty Scrutiny Groups for programme validation
- Taking part in programme validation meetings by joining a panel of students to meet with the Faculty 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

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

Career Opportunities

Students completing the programme will have developed extensive research skills in their chosen field alongside a range of transferable skills. Students will be well prepared for a career in biosciences research either inside or outside of academia. Other career opportunities might include managing clinical trials, research management, or working with research funders. Throughout the programme, but particularly during the course of years 2-4, students are encouraged to reflect on their career development and will have access to a number of workshops provided by the Careers & Employability Service to help support them with this.

External Examiner(s) for the programme

Name: Dr Frances Fuller-Pace - University of Dundee

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	No costs will be incurred when using University computer facilities.
Conference expenses	<p>Accommodation Students may have the opportunity to attend an academic conference during their studies. You would not normally be expected to pay for the costs of any accommodation directly associated with the conference. You would be expected to pay for incidental expenses eg. meals.</p> <p>Travel Students may have the opportunity to attend an academic conference during their studies. You would not normally be expected to pay for the costs of any travel directly associated with the conference.</p>
Hardware	Across all campuses and most halls of residence approximately 1700 computer workstations are available. Currently all students are provided with a desktop or laptop computer to support their studies.
Stationery	You will be expected to provide your own day-to-day stationery items, e.g. pens, pencils, notebooks, etc). Any specialist stationery items will be specified under the Additional Costs tab of the relevant module profile.
Placements (including Study Abroad Programmes)	<p>Accommodation Depending on the nature of the research project, students may attend a placement with an industry partner or collaborative institution. You would not normally be expected to pay for the costs of any accommodation associated with the placement. You would be expected to pay for incidental expenses eg. meals.</p> <p>Insurance Depending on the nature of the research project, students may attend a placement with an industry partner or collaborative institution. You would not normally be expected to pay the costs of any insurance. Students should check their own vehicle insurance to ensure they are appropriately covered for travel to placements.</p> <p>Medical insurance Depending on the nature of the research project, students may attend a placement with an industry partner or collaborative institution. You would not normally be expected to pay the costs of any medical insurance unless you are located in the USA.</p> <p>Travel costs Depending on the nature of the research project, students may attend a placement with an industry partner or collaborative institution. You would not normally be expected to pay for the costs of any travel associated with the placement.</p> <p>Immunisation/ vaccination costs Depending on the nature of the research project, students may attend a placement with an industry partner or collaborative institution. You would normally be expected to pay for any immunisation/vaccination costs associated with overseas travel if you are located outside of the UK.</p> <p>Disclosure and Barring Certificates or Clearance Depending on the nature of the research project, some students will require an enhanced Disclosure and Barring Service Clearance check. The cost is £50 (as per April 2018).</p>
Occupational Health, DBS checks or vaccinations	Some research projects may require you to undertake a Disclosure and Barring Service (DBS) check. The cost of this will be up to £50 (as per April 2018).
Fieldwork: logistical costs	<p>Accommodation Depending on the nature of the research project, students may complete fieldwork/data collection at locations other than Southampton. You would not normally be expected to pay for the costs of any accommodation</p>

	<p>associated with the fieldwork/data collection. You would be expected to pay for incidental expenses eg. meals.</p> <p>Insurance Depending on the nature of the research project, students may complete fieldwork/data collection at locations other than Southampton. You would not normally be expected to pay for the costs of any insurance. Students should check their own vehicle insurance to ensure they are appropriately covered for undertaking fieldwork/data collection.</p> <p>Travel costs Depending on the nature of the research project, students may complete fieldwork/data collection at locations other than Southampton. You would not normally be expected to pay for the costs of any travel associated with the fieldwork/data collection.</p> <p>Immunisation/ vaccination costs Depending on the nature of the research project, students may complete fieldwork/data collection at locations other than Southampton. You would normally be expected to pay for any immunisation/vaccination costs associated with overseas travel if you are located outside of the UK.</p>
<p>Printing and Photocopying Costs</p>	<p>In the majority of cases, coursework such as essays; projects; dissertations is likely to be submitted on line. However, there are some items where it is not possible to submit on line and students will be asked to provide a printed copy. University printing costs, follow link http://www.southampton.ac.uk/isolutions/students/printing-for-students.page?</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/ .