

## Programme Specification

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### **BSc (Hons) Healthcare Science (Cardiac Physiology or Respiratory & Sleep Physiology): Academic Year 2017-18**

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
Accreditation details	National School of Healthcare Sciences (NSHCS) Registration Council for Clinical Physiologists (RCCP) Academy for Health Care Science (AHCS)
Final award	Bachelor of Science (Honours)
Name of award	BSc (Hons) Healthcare Science (Cardiac Physiology) BSc (Hons) Healthcare Science (Respiratory & Sleep Physiology)
Interim Exit awards	Certificate of Higher Education in Health Sciences Diploma of Higher Education in Health Sciences
FHEQ level of final award	Level 6
UCAS code	Cardiac Physiology B120 (3 Year) and 7D25 (4 Year)  Respiratory & Sleep Physiology B121 (3 Year) and B122 (4 Year)
QAA Subject Benchmark or other external reference	Department of Health, 2010, Modernising Scientific Careers The Academy for Healthcare Scientists (AHCS) Standards of Education and Training for Practitioner Training Programme (PTP). 1 <sup>st</sup> September 2014 <a href="http://www.ahcs.ac.uk/education-training/ptp-standards-of-education-and-training/">http://www.ahcs.ac.uk/education-training/ptp-standards-of-education-and-training/</a> AHCS Good Scientific Practice <a href="http://www.ahcs.ac.uk/2012/12/good-scientific-practice/">http://www.ahcs.ac.uk/2012/12/good-scientific-practice/</a> The Registration Council for Clinical Physiologists (RCCP) Standards of Proficiency. July 2012 RCCP Guidelines for Accreditation for Education Providers. <a href="http://www.rccp.co.uk/articles/76/RCCP-Guidelines-for-Accreditation-for-Education-Providers">http://www.rccp.co.uk/articles/76/RCCP-Guidelines-for-Accreditation-for-Education-Providers</a>
Programme Lead	Mr Richard Bain
Date specification was written	December 2014 (Reviewed Sept 2016)
Date specification last updated	April 2017

### **Programme Overview**

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#### **Brief outline of the programme**

This BSc (Hons) Healthcare Science is a 3 or 4\*\* year programme which, on successful completion, confers eligibility to apply to the Registration Council for Clinical Physiologists (RCCP) and/or the Academy of Healthcare Science (AHS) for registration as a cardiac physiologist.

On the BSc Healthcare Science degree course (3 year) you will study both cardiac physiology and respiratory & sleep physiology in your first year before specialising in cardiac physiology in your second and third years. Cardiac physiology is concerned with heart function while respiratory & sleep physiology concentrates on breathing difficulties and sleep disorders.

Throughout your study you will learn how to diagnose a whole spectrum of complaints thanks to our learning facilities and highly respected academics. In addition, we put special emphasis on acquiring skills of emotional intelligence like empathy and compassion. These are particularly important because people with undiagnosed conditions will often be deeply worried or anxious.

\*\*Some places are available to those who wish to study more flexibly over a four year period. These students may be employed by local NHS Trusts and they study and work at the same time. Their clinical work is accredited as parallel practice placement. Others may wish to study more flexibly because of employment or caring responsibilities.

### **Learning and teaching**

You are supported in an experiential, problem-solving learning approach to acquire knowledge and skills in a contextual and integrated manner this is achieved through the use of: key-note lectures; student and tutor led tutorials and seminars; case based learning; inter-professional and trans-disciplinary learning; group work; directed learning activities; practical skill based sessions; experiential learning; practice placement experience; web based learning and video/DVD resources. In addition, the Faculty has underlined its commitment to engage in the pursuit of research excellence to underpin practice by ensuring you are facilitated and supervised by research-led and research-informed academic educators. Your learning will be facilitated through: expert-led lectures; student and tutor-led seminars & debates; action learning sets; e-learning; problem-based learning opportunities; tutorials, self-directed study and conference style presentations. Finally, the Faculty is committed to developing learners who are independent, intrinsically motivated thinkers who can utilise reflective practice to critically analyse their own and others' practice both in the academic and practice placement settings. Your independent learning will be facilitated through active participation in learning sessions; computer based learning; self-directed study, guided learning activities; conference attendance; case based learning opportunities; tutorials; academic and personal reviews; personal portfolio development and reflective diaries.

### **Assessment**

Throughout this healthcare science degree course you will be assessed on your knowledge, clinical skills and attitudes. You will be expected to complete essays and written exams, along with practical exams. Your clinical practice grades will also count significantly towards your final award.

The Faculty allows you to demonstrate your successful learning using fair and reliable assessment methods. These include formative and summative assessments such as: essays; extended essays; written case studies; unseen examinations; practice placement assessment; production of research reports; practical/laboratory demonstrations; conference style practical presentations; poster presentations; critical appraisal of literature; group guided learning activities; group presentations and the use of video/DVD to demonstrate skills and reflection.

## **Educational Aims of the Programme**

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The main aims of the programme are to:

- Provide you with the knowledge, skills and attitudes to equip you for a career in modern clinical physiology
- Develop your understanding of the application of physiological science across cardiovascular and respiratory & sleep science so that you are able to work safely within these environments
- Recognise the principles and properties of the measurement techniques that underpin investigations in cardiology and respiratory & sleep science
- Develop your competence in applying professional skills to the autonomous practice of cardiac physiology and respiratory & sleep physiology
- Develop key, transferable skills for general use in graduate employment to enable you to become a provider of quality care for users of health services
- Develop critical and analytical competence so that you become a user and/or creator of research evidence to improve health care and its outcomes
- Provide opportunities for you to learn with and from other healthcare professionals so that you develop competence in inter-professional practice to meet the needs of service users

- Provide you with the capacity for life-long learning
- Provide a responsive curriculum that acknowledges the need to work within a diverse and changing health and social care environment
- Provide a stimulating educational programme which fulfils the University criteria for the award of an honours degree.

The programme provides opportunities for you to develop and demonstrate knowledge & understanding, professional skills, intellectual skills, key skills and graduate attributes in the following areas:

## **Programme Learning Outcomes**

### **Knowledge & Understanding**

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Having successfully completed this programme you will be able to demonstrate knowledge and understanding of:

1. current theoretical perspectives on healthcare science practice
2. anatomy, physiology, pharmacology, pathology, biochemistry, immunology, epidemiology, public health medicine, genetics, microbiology and the psychosocial dimensions of health to provide the foundations for practice in the physiology divisions of healthcare science
3. requirements of the Department of Health (DoH) in respect of clinical governance and its importance within healthcare practice
4. ethical, moral and legal issues in relation to healthcare science
5. the importance of the theoretical and scientific basis of evidence-based practice including research, research methodology and clinical audit in order to continually improve healthcare services
6. modern provision of healthcare in the public sector including health promotion: leadership, management, funding, structure, drivers of change and policies.

### **Intellectual and Research Skills**

Having successfully completed this programme you will be able to demonstrate appropriate intellectual skills including the ability to:

1. formulate strategies for selecting appropriate and relevant information from a wide range of professional and inter-professional sources of knowledge
2. synthesise and critically appraise information from a variety of sources in order to gain a coherent and evidenced based understanding of healthcare science theory and practice
3. reflect critically on your own and other's professional practice and recognise the limits of your competency
4. utilise appropriate study skills to facilitate your own learning
5. engage in debate and discussion in areas of professional controversy and future professional development areas including debating leadership within the NHS
6. construct reasoned argument concerning the funding and ethics of modern health and social care
7. identify the needs of service users from physical, psychological, environmental, social, emotional and spiritual perspectives to understand and value the diversity and complexity of human behaviour
8. communicate with other professionals and agencies working in collaboration with cardiac and respiratory & sleep physiology services, to ensure the needs of service users are met.

### **Transferable and/or Generic Skills**

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Having successfully completed this programme you will be able to demonstrate skills necessary to:

1. communicate effectively in a variety of forms to a variety of audiences
2. critically evaluate academic, clinical and professional performance and utilise research skills
3. effectively manage time and prioritise workload to sustain efficient and effective practice
4. work autonomously and develop leadership skills
5. demonstrate a concern for and promote the safety, rights, dignity and diversity of clients and colleagues
6. demonstrate adherence to safe practice by ensuring the safety of yourself as a practitioner, your client and others who utilise your service through risk assessment and management
7. utilise creative problem-solving skills in a variety of theoretical and practical situations
8. utilise information management/technologies to support learning, practice and research activities and take responsibility for this
9. contribute confidently and appropriately to discussion utilising evidence based practice to support and justify your argument and professional decisions
10. demonstrate effective self-management in order to manage personal emotions and stress
11. manage change effectively and respond to changing service demands

12. evaluate your own personal, academic, clinical and professional performance through reflective practice
13. take responsibility for the continuing development required to engage with life-long learning needs.

### **Specific Professional Skills for Cardiac Physiology / Respiratory & Sleep Physiology Practice**

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Having successfully completed this programme you will be able to:

1. practise autonomously, professionally and be responsible and accountable for safe, evidence-based practice with particular reference to physiological measurement and intervention
2. fully articulate the role of cardiac and respiratory & sleep physiologists in relevant patient pathways
3. demonstrate understanding of the broad base of physiological science and apply that knowledge with respect to the cardiac and respiratory clinical sciences
4. understand the patho-physiology of medical/surgical conditions which may affect cardiovascular and respiratory well-being
5. understand the basic principles underpinning routine investigations and procedures carried out in the treatment of cardiovascular disease or respiratory disease
6. use appropriate diagnostic, decision-making and risk assessment skills and safely use invasive and non-invasive procedures, medical devices, current technological and pharmacological interventions
7. work in partnership with other healthcare professionals, agencies and service users in all settings to ensure decisions about care are informed and shared
8. promote the concept, knowledge and practice of patient centred care.

### **Graduate Attributes**

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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.

In addition to the subject specific knowledge and skills by studying at the University of Southampton you will also have the opportunity to develop the following Graduate Attributes.

#### **Global Citizenship**

Global Citizens recognise the value of meaningful contribution to an interconnected global society and aspire to realise an individual's human rights with tolerance and respect

This may be further understood as:

- Appreciation of ethical and responsible practices
- Awareness of social, civic and environmental responsibilities
- Appreciation of the value of diversity

#### **Ethical Leadership**

Ethical Leaders understand the value of leading and contributing responsibly to the benefit of their chosen professions, as well as local, national and international communities

This may be further understood as:

- Capacity to work well in a team including virtual communities
- Ability to respond responsibly to complex new situations
- Appreciation of enterprise to exercise tolerant and fair practices

#### **Research and Inquiry**

Research and Inquiry underpin the formulation of well-informed new ideas and a creative approach to problem resolution and entrepreneurial behaviour

This may be further understood as:

- A capacity to identify, define and creatively respond to a challenge

- Ability to locate effectively, analyse and evaluate information
- Ability to sustain intellectual engagement with a subject.

### **Academic**

Academic attributes are the tools that sustain an independent capacity critically to understand a discipline and apply knowledge

This may be further understood as:

- Openness to new ideas, methods and ways of thinking
- Deep knowledge of a subject informed by an understanding of the interconnectedness of different disciplines
- A capacity to make critical judgements.

### **Communication Skills**

Communication Skills encompass an individual's ability to demonstrate knowledge, and to express ideas with confidence and clarity to a variety of audiences

This may be further understood as:

- Ability to select and apply verbal, written, numerical and visual literacy
- Ability to utilise presentation skills in order to represent ideas and data
- Familiarity with a range of appropriate communication technologies.

### **Reflective Learner**

The Reflective Learner is capable of the independent reflection necessary to continuously learn and meet the challenge of pursuing excellence

This may be further understood as:

- An ability to respond effectively to new challenges
- An ability to sustain intellectual curiosity
- An ability to utilise continuously learned skills and constantly to seek improved solutions.

Please refer to the appendices for mapping proposed curriculum to the University of Southampton's Graduate Attributes.

## **Programme Structure**

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### **Typical course content**

The programme is 3 or 4 years long and incorporates 1800 hours (50 weeks) of clinical practice in accordance with the requirements of NSHCS and RCCP.

Students are recruited into cardiac physiology. The first year of the 3 year programme (level 4) is generic to both the cardiac physiology and the respiratory & sleep physiology pathways. It provides an introduction to modern healthcare practice and deals with the scientific basis of healthcare, including anatomy, physiology and pathology modules, and modules which introduce basic diagnostic tests and the underpinning theory. During the year, students will have an opportunity to observe in each of the two specialisms for one week each and then at the end of the academic year to undertake a formal 4 week clinical placement in each specialism (10 weeks in total).

At the beginning of the second year (level 5) students follow the specialist modules dedicated to their designated area of practice. Second year modules are concerned with the application of basic sciences to real-life health scenarios and to learning about more advanced diagnostic techniques for practice. Other modules undertaken include signal processing and pathophysiology. All students will study research methods focussing on both quantitative and qualitative approaches. After the Easter vacation, all students go to their ~~chosen~~ area of specialism for a formal 15 week clinical placement.

The final year of the programme (level 6) prepares the students for autonomous practice in modern health care settings: It requires a focus on the application of cardiac physiology to patient care. It also requires a concentration on ethical, reflective professional practice and the skills necessary to undertake clinical research. All knowledge and skills acquired during the programme are put into practice in the final, formal clinical placement (25 weeks). Whilst on this final placement, students undertake a research project, linked with their specialism, which will provide the basis for their final assessment submission.

The timetable for the 4 year pathway differs as detailed later.

### **Special Features of the programme**

Special features of the programme include:

- Access to a dedicated Skills Lab equipped with cardiac and respiratory equipment, where students can gain practical competence before starting their clinical placements
- Access to the Faculty of Medicine's Anatomy Laboratory to enhance the learning of anatomy and physiology
- A new initiative approved by Health Education England whereby students who work part-time as trainee physiologists are eligible to apply for some of their worked hours to count towards their placement hours.

### **Programme details**

The award of the degree of BSc (with Honours) is attained by following a full-time route which comprises a 120 week programme and completion of a minimum of 180 European Credit Transfer Scheme (ECTS) points at the appropriate levels (this is equivalent to 360 points in the UK Credit Accumulation and Transfer Scheme). The full-time route is studied over 3 full academic years. Alternatively, students may opt to follow a part-time route which also attracts 180 ECTS points and is studied over 4 full academic years.

The full-time programme is undertaken at National Qualifications Framework (NQF) academic levels 4, 5 and 6, corresponding to years 1, 2 and 3 of the full-time programme and the University's Part 1, 2 and 3. Completion of each level accrues a minimum of 60 ECTS credits at the respective level. The full time route is normally completed in 3 years and the maximum allowed period of registration is normally 6 years to comply with professional body requirements. Full-time students are required to be available for 5 days per week with a mixture of directed and self-directed study.

The part-time programme is also undertaken at (NQF) academic levels 4, 5 and 6, corresponding to the University's Part 1, 2 and 3. Completion of each level accrues a minimum of 60 ECTS credits at the respective level. The part-time route is normally completed in 4 years and the maximum allowed period of registration is normally 8 years to comply with professional body requirements. Part-time students are required to be available for 3 days per week with a mixture of directed and self-directed study. There are periods in the part-time course that are delivered full-time (e.g. induction / employability week; some practice placements) and these periods of full-time study will be notified to students in advance so that arrangements can be made.

The programme is divided into study modules which each carry credit. All modules are core to the programme. Multi-professional learning is a strength of the University of Southampton and students from several different disciplines (including: audiology; healthcare science; midwifery; nursing; occupational therapy; physiotherapy; podiatry) have opportunities to undertake optional shared learning. A number of core modules are offered in a shared learning capacity with other professional student groups e.g. midwifery, nursing, occupational therapy, physiotherapy and podiatry.

The balance of the programme is 60% academic time and 40% practice placement designed so that on completion of the programme, students are ready for employment as cardiac physiologists. The amount of work-based learning (50 weeks) is determined by the requirements of the professional and statutory bodies (DoH, 2010, Modernising Scientific Careers Programme, London: TSO)

#### **The full-time programme (students available for study 5 days per week)**

See Figure 1 for a summary of academic modules studied during each year of the full-time programme.

#### **The part-time programme (students available for study 3 days per week)**

See Figure 2 for a summary of academic modules studied during each year of the part-time programme.

In essence, for the part-time route, the first two years of the full-time programme are delivered part-time over three years and then the final year is delivered as per the full-time programme.

During the first year, part time students learn about modern professional practice and the scientific basis of healthcare.

During the second year of the part-time programme students study the scientific basis of cardiovascular or respiratory & sleep sciences and undertake the research methods module from level 5. At the end of the year they attend two blocks of four weeks (attending 3 days each week), one in cardiac, the other in respiratory and sleep.

Prior to the commencement of the third year of the part-time programme (level 5) students follow the modules dedicated to that area of practice, with the exception of the research module. After the Easter vacation, all students will go to their chosen area of specialism for a formal 15 week placement (attending 2 days per week).

During the fourth year of the programme, students undertake Level 6 modules in the same format as the third year of the full-time programme. After the Christmas vacation, all students go to their chosen area of specialism for a formal 25 week placement (attending 3 days per week).

**Figure 1**

The following diagram summarises the modules studied during the full-time programme:

Year	Level	Modules	ECTS Points	Exit Award
1	4	Introduction to Professional Practice	7.5	
1	4	Scientific Basis of Healthcare Science (part 1)	7.5	
1	4	Scientific Basis of Healthcare Science (part 2)	7.5	
1	4	Scientific basis of Healthcare Science (part 3)	7.5	
1	4	Scientific Basis of Cardiovascular/Respiratory & Sleep Science (part 1)	7.5	
1	4	Scientific Basis of Cardiovascular/Respiratory & Sleep Sciences (part 2)	15	
1	4	Work-Based Training 1 (x 10 weeks total)	7.5	
		<b>Total credit points for level 4 / Part 1</b>	<b>60</b>	<b>Certificate in Health Sciences (60)</b>
2	5	Quantitative & Qualitative Approaches in Research (Research Methods)	7.5	
2	5	Instrumentation, Signal Processing and Imaging	15	
2	5	Pathophysiology of Common Cardiovascular and Respiratory Conditions	7.5	
2	5	Cardiac Physiology	15	
2	5	Work-Based Training 2 (x 15 weeks)	15	
		<b>Total credit points for level 5 / Part 2</b>	<b>60</b>	<b>Diploma in Health Sciences (120)</b>
3	6	Future Professional Practice: Influencing Innovation & Change	7.5	
3	6	Advanced Cardiac Physiology	15	
3	6	Research Project	15	
3	6	Work-Based Training 3 (x 25 weeks)	22.5	
		<b>Total credit points for level 6 / Part 3</b>	<b>60</b>	<b>BSc (Hons) Healthcare Science (180)</b>

**Figure 2**

The following diagram summarises the modules studied during the part-time programme:

Year	Level	Modules	ECTS Points	Exit Award
1	4	An Introduction to Professional Practice	7.5	
1	4	Scientific Basis of Healthcare Science (part 1)	7.5	
1	4	Scientific Basis of Healthcare Science (part 2)	7.5	
1	4	Scientific Basis of Healthcare Science (part 3)	7.5	
1	4	Work-Based Training 1a	Credit awarded after second year	
2	4	Scientific Basis of Cardiovascular/Respirator and Sleep Sciences (1)	7.5	
2	4	Scientific Basis of Cardiovascular/Respirator and Sleep Sciences (2)	15	
2	4	Work-Based Training 1b (by end of year 2 x 10 weeks total)	7.5	
		<b>Total credit points for level 4 / Part 1</b>	<b>60</b>	<b>Certificate in Health Sciences (60)</b>
2	5	Quantitative & Qualitative Approaches in Research (Research Methods)	7.5	
3	5	Instrumentation, Signal Processing and Imaging	15	
3	5	Pathophysiology of Common Cardiovascular and Respiratory Conditions	7.5	
3	5	Respiratory and Sleep Physiology	15	
3	5	Work-Based Training 2 (x 15 weeks)	15	
		<b>Total credit points for level 5 / Part 2</b>	<b>60</b>	<b>Diploma in Health Sciences (120)</b>
4	6	Future Professional Practice: Influencing Innovation & Change	7.5	
4	6	Advanced Cardiac Physiology	15	
4	6	Research Project	15	
4	6	Work-Based Training 3 (x 25 weeks)	22.5	
		<b>Total credit points for level 6 / Part 3</b>	<b>60</b>	<b>BSc (Hons) Healthcare Science (180)</b>

The minimum pass mark for all modules is 40% (or Pass where the assessment is on a Pass/Fail basis). Re-sit for any failed assessments will be scheduled at the first available assessment opportunity.

### Progression Requirements

The programme follows the University's regulations for ***Progression, Determination and Classification of Results: Undergraduate and Integrated Masters Programmes*** as set out in the University Calendar: <http://www.calendar.soton.ac.uk/sectionIV/sectIV-index.html>. The University regulations allow for students to undertake referred attempts in up to 30 ECTS at each level/part as the programme deems all modules to be core to the programme.



## Intermediate exit points

There is no exit award which confers eligibility to practise other than the full award. But you will be eligible for an interim academic exit award if you complete part of the programme but not all of it, as follows:

Qualification	Minimum overall credit in ECTS credits	Minimum ECTS Credits required at level of award
Diploma of Higher Education in Health Sciences	at least 120	45 – at level 5
Certificate of HE in Health Sciences	at least 60	45 – at level 4

The level of development of the knowledge, understanding and skills is indicated by the learning outcomes detailed below against each of the intermediate exit awards.

### Certificate of Higher Education in Health Sciences

Having successfully completed the Level 4 modules you will be able to demonstrate

1. knowledge of underlying concepts of the biological, physical and behavioural sciences that underpin normal healthcare practice
2. knowledge of the principles that underpin care in normal practice
3. skill in selecting and using appropriate interventions which can be used in a practice setting
4. communicate the results of your study accurately and reliably
5. an ability to work within a team to complete shared tasks.

### Diploma of Higher Education in Health Sciences

Having successfully completed the level 4 and 5 modules you will be able to demonstrate

1. knowledge and critical understanding of the established principles of practice
2. an ability to apply the underlying concepts and principles of practice outside the context in which they were first studied
3. an ability to apply the underlying concepts and principles of healthcare science in a placement environment under the supervision of a registered Cardiac physiologist or Respiratory & Sleep physiologist
4. knowledge of the main methods of enquiry and an ability to critically evaluate the appropriateness of different approaches to problem solving and clinical reasoning
5. understanding of the limits of your knowledge and how this influences analysis and interpretation of information and application of clinical skills
6. a willingness to undertake further training, develop existing skills and acquire new competences that will enable you to assume significant responsibility within organisations.

## Support for Student Learning

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There are systems available both to support your learning in the Faculty and from the central University

### In the Faculty you will be able to access:

- A tutorial system – you will have an allocated personal tutor and access to a senior tutor to take an interest in your whole experience of being a student at the University Southampton
- An induction programme for orientation to the Faculty
- Opportunities to learn from a wide range of health professionals
- Student handbooks to support campus based studies, work based placement and to explain assessment regulations
- Faculty computer workstations
- Web-based learning facilities both Faculty and University provided
- Library and study skills packages available in Faculty as well as in the libraries and learning centres. Faculty student learning advisors are also available to support learning
- Practical skills labs and specialist equipment for student-led learning
- Practice placement opportunities
- Placements have locality contact visits by academic staff to support both you and your practice supervisors and to guide you on assessment issues
- Dedicated practice placement academic and administration staff to ensure excellent liaison between the Faculty and the placement locations
- A student representative system and staff/student liaison committee so that your views on the programme can be heard both during the teaching periods and after the modules are completed.

### **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 student owned 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 account for students which connects them 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 their timetables, Module information, Locations, Tutor details, Library account, bus timetables etc. to them whilst on the move.
- IT support through a comprehensive website, telephone and online ticketed support and a dedicated helpdesk in the Student Services Centre
- Enabling Services offering assessment and support (including specialist IT support) facilities if you have a disability, dyslexia, mental health issue or specific learning difficulties
- The Student Services Centre (SSC) assisting students 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
- A range of personal support services : mentoring, counselling, residence support service, chaplaincy, health service
- 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 for students making academic appeals
- Support for student peer-to-peer groups, such as Nightline.

### **Associated with your programme you will be able to access:**

- Professional bodies' (e.g. Society for Cardiological Science and Technology (SCST)) libraries, journals, special interest groups and publications
- Support while in placement via the Faculty support strategy for learning in practice
- Facilities based at some of the sub campuses/study centres.

## **Methods for evaluating the quality of teaching and learning**

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We consider it extremely important that your comments and those of your student colleagues influence any change and development that may be made to the programme. We intend that the programme is 'student centred' and to meet that we aim to encourage you to have your say on the learning experience at Southampton. We will achieve this through seeking your views and opinions by:

- Monitoring of individual student progression through personal tutor and review system
- Monitoring of modules through student mentor system
- Module evaluation and report including for practice placement
- Annual Faculty/University Learning and Teaching Reports and Action Plans
- Annual monitoring by Higher Education Wessex
- Annual external examiners' reports
- Annual report to the professional bodies
- Quinquennial review and re-approval involving professional statutory bodies, the University, Higher Education Wessex, employers and peer professionals
- Student reflection of clinical experience

- Student membership of programme committees.

## Criteria for Admission

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### University Commitment

The University will at all times seek to operate admissions regulations that are fair and are in accordance with the law of the United Kingdom, and the University's Charter, Statutes, Ordinances and Regulations.

This includes specific compliance with legislation relating to discrimination (e.g. Equality Act 2010) and the University's Equal Opportunities Policy Statement. This includes a commitment that the University will:

- actively assist groups that experience disadvantage in education and employment to benefit from belonging to the University
- actively seek to widen participation to enable students that do not traditionally participate in Higher Education to do so;
- ensure that admission procedures select students fairly and appropriately according to their academic ability and that the procedure is monitored and regularly reviewed.

The Faculty welcomes applications from Faculty leavers, graduates and mature students. To be admitted to the Bachelor of Healthcare Sciences (Hons) programme you must be able to satisfy the requirements of the University of Southampton. Applicants, who are already graduates, should hold a first degree (preferably – but not exclusively – in a related area).

Since you will be working with physically and psychologically vulnerable people, it is important that you should be physically and mentally well on entering the BSc (Hons) Healthcare Science programme. You will be required to undertake an occupational health screening process and may need to update your immunisation status before going on clinical placement. Disability is not a bar to entry as long as you are capable of working in your designated specialism.

You must declare any convictions, cautions, reprimands or final warnings that are not 'protected' as defined by the Rehabilitation of Offenders Act 1974 (Exceptions) order 1975 (as amended in 2013). You must disclose any police record and discuss it, in confidence, with the programme leader. Having a record will not necessarily debar you from entering the programme.

All places are conditional on satisfactory evidence of academic achievement and health & criminal record checks.

Students registered on this programme are strongly encouraged to become members of a recognised professional body or health union such as the Association for Respiratory Technology & Physiology (ARTP), Society for Cardiological Science and Technology (SCST) affiliated to the British Cardiovascular Society (BCS).

### Entry Requirements

<b>A Levels:</b>	Minimum 3 A Levels at Grade ABB to include a science subject
<b>GCSEs:</b>	Minimum 5 GCSE's at Grade 4-9 or A*-C to include Mathematics, English and Science
<b>IB:</b>	32 points, 16 at higher level
<b>Alternative qualifications:</b>	<p>Access to Higher Education – 33 distinction credits at Level 3 from science based course. BTEC Extended Diploma (in health studies or science) – D*DD.</p> <p>We also accept other qualifications such as Scottish Higher, Irish Leaving Certificate and certain Open University courses.</p> <p>Alternative academic qualifications equivalent to 125 UCAS tariff points are considered on a case by case basis.</p>
<b>Mature applicants:</b>	No exceptions.

## Recognition of Prior (Experiential) Learning (RP(E)L)

Applications for recognition of prior learning will be considered on a case by case basis in line with our Faculty and University policy.

## Career Opportunities

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Healthcare scientists are at the forefront of technological and scientific developments in the health sector. They work as part of medical teams in hospitals, and also out in the community to treat cardiovascular, respiratory and sleep-related conditions. After graduating with a degree in healthcare science, you will be eligible to apply for professional registration and could pursue a career with the National Health Service, for example. As a cardiovascular or respiratory & sleep science practitioner you will work with people of all ages with suspected illnesses. The ability to work closely with specialist doctors, nurses and other health professionals will also be essential. That is why individuals with excellent interpersonal skills are ideal candidates for this profession. Many students return to the University during their careers to continue their professional development. To meet this demand, the Faculty of Health Sciences offers short post-qualification courses, MSc, PhD, Integrated PhD and Clinical Doctorate programmes on a full or part-time basis.

More information about careers in Healthcare Science can be found on the NHS Careers website.

## External Examiner(s) for the programme

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<b>Name</b>	Angela Sims
<b>Institution</b>	University of South Wales

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.

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**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 other appropriate guide) or online at [http://www.southampton.ac.uk/healthsciences/undergraduate/courses/bsc\\_healthcare\\_science\\_cardio.page?#overview](http://www.southampton.ac.uk/healthsciences/undergraduate/courses/bsc_healthcare_science_cardio.page?#overview).

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# Appendix:

## Learning outcomes and Assessment Mapping document template

EDUCATIONAL AIMS OF THE PROGRAMME	Introduction to prof practice	SB of HCS 1	SB of CV/R & Sleep 1	SB of HCS 2	SBHCS 3	Work-Based Training 1	SB of CV/R & Sleep 2	Instrumentation, Signal Processing and Imaging	Quantitative and Qualitative Approaches in Research	Pathophysiology of common Cardiovascular and Respiratory Conditions	Cardiac /Respiratory & SleepPhysiology	WBT 2	Applying Cardiac/Respirat ory & Sleep Physiology to Practice	Healthcare Futures and Innovations	Research	WBT 3
<b>Programme learning outcomes</b>																
Provide you with the knowledge, skills and attitudes to equip you for a career in modern Healthcare Sciences	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Develop your understanding of the application of physiological science across cardiovascular and respiratory & sleep science so that you are able to work safely within these environments			•		•	•	•	•			•	•	•			•
Recognise the principles and properties of the measurement techniques that underpin investigations in cardiology and respiratory & sleep science			•				•	•			•					
Develop your competence in applying professional skills to the autonomous practice of cardiac physiology or respiratory & sleep physiology	•		•			•	•				•	•	•	•		•
Develop key, transferable skills for general use in graduate employment to enable you to become a provider of quality care for users of health services	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Develop critical and analytical competence so that you become a user and/or creator of research evidence to improve health care and its outcomes	•	•	•	•			•	•	•	•	•		•	•	•	•
Provide opportunities for you to learn with and from other healthcare professionals so that you develop competence in inter-professional practice to meet the needs of service users	•			•		•			•			•		•	•	•
Provide you with the capacity for life-long learning	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•
Provide a responsive curriculum that acknowledges the need to work within a diverse and changing health and social care	•		•			•	•				•	•	•	•		•

EDUCATIONAL AIMS OF THE PROGRAMME	Introduction to prof practice	SB of HCS 1	SB of CV/R & Sleep 1	SB of HCS 2	SBHCS 3	Work-Based Training 1	SB of CV/R & Sleep 2	Instrumentation, Signal Processing and Imaging	Quantitative and Qualitative Approaches in Research	Pathophysiology of common Cardiovascular and Respiratory Conditions	Cardiac /Respiratory & Sleep Physiology	WBT 2	Applying Cardiac/Respirat ory & Sleep Physiology to Practice	Healthcare Futures and Innovations	Research	WBT 3
environment.																
Provide a stimulating educational programme which fulfils the University criteria for the award of an honours degree.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>A: KNOWLEDGE AND UNDERSTANDING</b>																
<b>Programme learning outcomes</b>																
Current theoretical perspectives on healthcare science practice	•		•			•	•				•	•	•		•	•
Anatomy, physiology, pharmacology, pathology, biochemistry, immunology, epidemiology, public health medicine, genetics, microbiology and the psychosocial dimensions of health to provide the foundations for practice in the physiology divisions of healthcare science		•	•	•	•		•			•	•		•			
Requirements of the Department of Health (DoH) in respect of clinical governance and its importance within healthcare practice	•		•			•	•				•	•		•	•	•
Ethical, moral and legal issues in relation to healthcare science	•					•			•			•		•	•	•
The importance of the theoretical and scientific basis of evidence-based practice including research, research methodology and clinical audit in order to continually improve healthcare services	•		•			•	•	•	•	•	•	•	•	•	•	•
Modern provision of healthcare in the public and private sectors including leadership, management, funding, structure, drivers of change and policies.	•			•		•						•		•		•

B: SUBJECT SPECIFIC INTELLECTUAL AND RESEARCH SKILLS															
Programme learning outcomes															
Formulate strategies for selecting appropriate and relevant information from a wide range of professional and inter-professional sources of knowledge	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Synthesise and critically appraise information from a variety of sources in order to gain a coherent and evidenced based understanding of healthcare science theory and practice							•	•	•	•		•	•	•	
Reflect critically on your own and other's professional practice and recognise the limits of your competency	•		•		•	•				•	•	•	•		•
Utilise appropriate study skills to facilitate your own learning	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Engage in debate and discussion in areas of professional controversy and future professional development areas including debating leadership within the NHS	•				•						•		•		•
Construct reasoned argument concerning the funding and ethics of modern health and social care	•				•			•			•		•	•	•
Identify the needs of service users from physical, psychological, environmental, social, emotional and spiritual perspectives to understand and value the diversity and complexity of human behaviour	•	•	•	•	•	•				•	•	•	•		•
Communicate with other professionals and agencies working in collaboration with cardiac and respiratory & sleep physiology services, to ensure the needs of service users are met.	•		•		•	•				•	•	•	•		•

TRANSFERABLE AND/OR GENERIC SKILLS															
Programme learning outcomes															
Communicate effectively in a variety of forms to a variety of audiences	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Critically evaluate academic, clinical and professional performance and utilise research skills	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Effectively manage time and prioritise workload to sustain efficient and effective practice	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Work autonomously and develop leadership skills	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Demonstrate a concern for and promote the safety, rights, dignity and diversity of clients and colleagues	•		•		•	•				•	•	•	•		•
Demonstrate adherence to safe practice by ensuring the safety of yourself as a practitioner, your client and others who utilise your service through risk assessment and management	•		•		•	•				•	•	•			•
Utilise creative problem-solving skills in a variety of theoretical and practical situations	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Utilise information management/technologies to support learning, practice and research activities and take responsibility for this	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Contribute confidently and appropriately to discussion utilising evidence based practice to support and justify your argument and professional decisions	•		•		•	•	•	•		•	•	•	•	•	•
Demonstrate effective self-management in order to manage personal emotions and	•		•		•	•				•	•	•	•		•



stress															
Manage change effectively and respond to changing service demands	•		•		•	•				•	•	•	•		•
Evaluate your own personal, academic, clinical and professional performance through reflective practice	•				•						•		•		•
Take responsibility for the continuing development required to engage with life-long learning needs.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

SPECIFIC CARDIAC PHYSIOLOGY / RESPIRATORY & SLEEP PHYSIOLOGY PRACTICE SKILLS															
Programme learning outcomes															
Practise autonomously, professionally and be responsible and accountable for safe, evidence-based practice with particular reference to physiological measurement	•		•		•	•	•	•		•	•	•	•	•	•
Fully articulate the role of cardiac and respiratory & sleep physiologists in relevant patient pathways	•		•		•	•				•	•	•			•
Demonstrate understanding of the broad base of physiological science and apply that knowledge with respect to the cardiac and respiratory clinical sciences	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Understand the patho-physiology of medical/surgical conditions which may affect cardiovascular and respiratory well-being		•	•	•	•	•			•	•	•	•			•
Understand the basic principles underpinning routine investigations and procedures carried out in the treatment of cardiovascular disease or respiratory disease			•		•	•	•			•	•	•			•
Use appropriate diagnostic, decision-making and risk assessment skills and safely use invasive and non-invasive procedures, medical devices, current technological and pharmacological interventions			•		•	•				•	•	•			•
Work in partnership with other healthcare professionals, agencies and service users in all settings to ensure decisions about care are informed and shared	•		•		•	•				•	•	•	•		•
Promote the concept, knowledge and practice of patient centred care.	•		•		•					•	•	•	•		•

The following diagram gives a summary of assessment methods used in this programme.

Module Code	Module Title	Coursework 1	Coursework 2	Exam
HPRS1028	Introduction to Professional Practice			Poster presentation and Viva <b>100%</b>
HPRS1026	Scientific Basis of Healthcare Science (Part 1)			<b>Exam 1.</b> Extended matched questions and short answers questions
HPRS1023	Scientific Basis of Cardiovascular/Respiratory & Sleep Science (Part 1)			<b>Exam 1.</b> Extended matched questions <b>50%</b> <b>Exam 2.</b> Short answer questions <b>50%</b>
HPRS1027	Scientific Basis of Healthcare Science (Part 2)			<b>Exam 1.</b> Extended matched questions And short answer questions
HPRS	Scientific Basis of Healthcare Science (part 3)			<b>Exam 1.</b> Extended matched questions and short answers questions
HPRS1024	Scientific Basis of Cardiovascular/Respiratory & Sleep Science (Part 2)			<b>Exam 1.</b> Extended matched questions <b>50%</b> <b>Exam 2.</b> Short answer questions <b>50%</b>
HPRS1019	Work-Based Training 1	Assessment in Practice <b>100%</b>		
HPRS2021	Instrumentation, Signal Processing and Imaging	1500 written assignment <b>50%</b>		2 hour written exam <b>50%</b>
AUDI2007	Quantitative and Qualitative Approaches in Research (Research Methods)	Quantitative data research report <b>50%</b>	Qualitative data research report <b>50%</b>	
HPRS2022	Pathophysiology of common Cardiovascular and Respiratory Conditions	2500 word Common pathology assignment <b>100%</b>		
HPRS2023	Cardiac Physiology	2000 word assignment <b>50%</b>		Short answer examination <b>50%</b>
HPRS2024	Respiratory and Sleep Physiology	2000 word assignment <b>50%</b>		Short answer examination <b>50%</b>
HPRS2026	Work-Based Training 2 (Cardiac Physiology)	Assessment in Practice <b>100%</b>		
HPRS2025	Work-Based Training 2 (Respiratory and Sleep Physiology)	Assessment in Practice <b>100%</b>		
HPRS3023	Futures Professional Practice	2500 word essay <b>100%</b>		
HPRS3021	Research Project	Research paper <b>80%</b>	Poster presentation <b>20%</b>	
HPRS3020	Advanced Cardiac Physiology	2500 case report <b>50%</b>		2 hour written exam <b>50%</b>
HPRS3019	Advanced Respiratory & Sleep Physiology	2500 case report <b>50%</b>		2 hour written exam <b>50%</b>
HPRS3022 Or HPRS3020	Work-Based Training 3 (Cardiac Physiology) or	Assessment in Practice <b>100%</b>		
HPRS3024	Work-Based Training 3 (Respiratory & Sleep Physiology)	Assessment in Practice <b>100%</b>		