



PROGRAMME SPECIFICATION

Part 1: Information	
Awarding Institution	University of the West of England, Bristol
Teaching Institution	University of the West of England, Bristol
Delivery Location	Frenchay Campus
Study abroad / Exchange / Credit recognition	N/A
Faculty responsible for programme	Health and Applied Sciences
Department responsible for programme	Applied Sciences
Professional Statutory or Regulatory Body Links	<ul style="list-style-type: none"> • National School of Healthcare Science (NSHCS) • Institute of Physics and Engineering in Medicine (IPEM)
Highest Award Title	BSc (Hons) Healthcare Science (Medical Physics Technology) Pathways: <ul style="list-style-type: none"> • BSc (Hons) Healthcare Science (Radiation Physics) • BSc (Hons) Healthcare Science (Nuclear Medicine) • BSc (Hons) Healthcare Science (Radiotherapy Physics)
Default Award Title	
Interim Award Titles	BSc Healthcare Science Cert HE Healthcare Science Dip HE Healthcare Science
UWE Progression Route	
Mode of Delivery	FT / PT
ISIS code/s	
For implementation from	September 2018
Degree Apprenticeship	Approved

Part 2: Description	
<p>The BSc (Hons) Healthcare Science (Medical Physics Technology) programme is part of the University's extensive Healthcare Science provision to provide the principle training route for Healthcare Science Practitioners and is aligned with the employer led Education and Skills Funding Agency Level 6 Healthcare Science Practitioner Degree Apprenticeship Standard.</p> <p>This exciting course is delivered through a unique collaboration between the University of the West of England and NHS providers, and has been developed in direct response to the Modernising Scientific Careers programme at the Department of Health. This has been established to develop a common career pathway, education and training standards for Medical Physicists (described as a Practitioner Training Programme or PTP), with professional specialisms in:</p>	

Part 2: Description

- [Radiation Physics](#)
- [Nuclear Medicine](#)
- [Radiotherapy Physics](#)

as defined by the National School of Healthcare Science.

The degree programme enables students to develop the knowledge and skills required of a healthcare scientist whilst also completing the extensive work-based training that forms an integral and significant proportion of a three year course, and to demonstrate specified standards of practice. The unique delivery of the course allows NHS staff to complete the qualification whilst remaining in-post through a combination of innovative online materials and focused block-release at UWE.

The programme provides:

- Opportunities for students from a wide range of backgrounds to develop and realise their potential in a supportive and responsive teaching and learning environment.
- Added value for learners in their specialised, subject-specific knowledge and transferable skills.
- The opportunity for students to develop the skills to reflect and review their own practice (both academically and professionally) and strive to improve personal performance.
- Development of the necessary skills and attributes for further professional development, through academic study and continual lifelong learning as enterprising healthcare science professionals.
- Embedded service user and carer interaction to put patient care at the heart of the training.

More specifically it provides:

- Cutting edge healthcare sciences using state of the art equipment and learning materials
- An understanding of the importance of patient-centered care, evidence based practice, clinical audit, multidisciplinary team working and sustainable development.
- Practical experience of working in NHS or private laboratories enabling the student to perform a range of relevant methods and techniques, and to undertake a project in a working context.
- An extensive use of blended approaches to support work-based-learning.
- The underpinning knowledge, skills and professional attitude to prepare students to work as a scientist, with research skills modules at all levels.
- A broad knowledge base in medical physics and biosciences with specific areas of deeper understanding relevant to healthcare sciences.
- A unique opportunity for students to develop specialist knowledge and skills within pathways specifically designed (and professionally required) for the pursuance of a career as a Healthcare Scientist in the NHS.

Programme requirements for the purposes of the Higher Education Achievement Record (HEAR)

The Medical Physics Technology programme is a professionally accredited course that integrates theoretical and practical approaches to understanding medical physics in the context of the human body in health and disease. It provides a foundation in core physics and bioscience subjects that builds to a choice of science specialisms at more advanced levels, e.g. radiation, radiotherapy physics & nuclear medicine. These subjects are supported by practical investigations to develop student proficiencies in data analysis, diagnosis and problem solving. Central to the programme is the medical physics professional work-based training portfolio which is an essential component of the student's career progression.

Regulations

Approved to [University Regulations and Procedures](#)

No modules can be considered for condonation.

Aegrotat awards will not give eligibility for NSHCS accreditation.

Part 3: Learning Outcomes of the Programme

The award route provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas:

<i>Learning Outcomes:</i>	USSKLJ-30-1 Scientific Basis of Medical Physics	USSJT6-30-1 Principles in Healthcare Sci.	USSJT7-30-1 Pathophysiology of Disease	USSJT8-30-1 Anatomy & Physiology	USSJT9-30-2 Scientific Practice	USSKLG-30-2 Advanced Medical Physics	USSKLL-30-2 Applied Medical Physics	USSJTC-30-2 Prof. Aspects of Health. Sci.	USSKLN-30-3 Adv. Rad. Phys. and Nuc. Med.	USSKLQ-30-3 Prac. of Rad. and Radio. Phys.	USSKLP-30-3 App. Radio. Phys. and Nuc. Med.	USSJSJ-30-3 Healthcare Science Project	USSJSK-30-3 Prof. Prac. for Health. Sci.	USSKLM-30-3 Prof. Healthcare Science Practice
A) Knowledge and understanding of:														
Demonstrate an underpinning knowledge of physics and biosciences that provides the foundations for study in the Medical Physics pathways of Healthcare Science.	x		x	x		x	x							
Understand the context of healthcare sciences and their application to practical problems.								x				x	x	x
Understand a broad range of diagnostic measurement techniques including the rationale for the investigation		x				x	x	x	x	x	x			
Demonstrate competence in specific areas of medical physics and laboratory measurement with an understanding of the principles underlying the techniques used.		x				x	x		x	x	x			
Demonstrate an understanding of the research, development and innovation across the NHS and in healthcare science in particular.					x							x	x	x
(B) Intellectual Skills														
Actively question and seek relevant information.		x			x				x	x	x	x	x	x
Compare and contrast information from different sources online and offline.	x		x	x					x	x	x	x		

Part 3: Learning Outcomes of the Programme																					
Critically evaluate information against hypotheses in a range of research scenarios.										x	x		x	x	x	x					
Actively analyse and apply problem-solving strategies.										x	x		x	x	x	x					
Demonstrate independent self-directed learning, and skills for life-long learning.												x	x	x	x	x	x	x			
(C) Subject/Professional/Practical Skills																					
Understand the importance of patient-centred care, evidence based practice, clinical audit and multidisciplinary team working.													x				x	x	x		
Critically observe, analyse and evaluate information arising from a wide range of sources.													x	x	x	x	x	x	x		
Apply practical approaches to the study of selective aspects of healthcare science and demonstrate an awareness of safety and good workplace practice.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Communicate effectively scientific data and concepts using a range of communication strategies.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Develop discipline-specific interests by specialising within the programme in relation to subject and/or career aspirations.										x	x	x	x	x	x	x	x	x	x		
Obtain, record, collate and critically analyse data using appropriate practical techniques, working as an individual or within a group.	x		x	x	x	x	x						x	x	x	x					
Demonstrate an understanding of the research process, including the current ethical and legal frameworks within which human and animal research can be conducted in the UK, through the execution of a research project.																		x	x	x	
(D) Transferable skills and other attributes																					
Communicate information, advice, instruction and professional opinion to colleagues, patients, clients, users, their relatives and carers.																			x	x	x
Critically analyse data arising from various means of physics, biological or work-based inquiry.										x	x			x	x	x	x	x	x	x	
Undertake active learning and development.																			x	x	x
Apply information management skills to their learning and practice.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Work effectively as a team member.	x	x	x	x						x	x	x	x	x	x	x	x	x	x	x	
Demonstrate an autonomous and reflective approach to lifelong learning.										x	x	x	x	x	x	x	x	x	x	x	

Part 4: Programme Structure

This structure diagram demonstrates the student journey from Entry through to Graduation for a typical **full time student**, including:

- level and credit requirements
- interim award requirements
- module diet, including compulsory and optional modules

ENTRY		Compulsory Modules	Optional Modules	Interim Awards
	Year 1	<ul style="list-style-type: none"> • USSKLJ-30-1 Scientific Basis of Medical Physics • USSJT6-30-1 Principles in Healthcare Science • USSJT7-30-1 Pathophysiology of Disease • USSJT8-30-1 Anatomy & Physiology 	None	Cert HE Healthcare Science Credit requirements: 120
	Year 2	<ul style="list-style-type: none"> • USSJT9-30-2 Scientific Practice • USSKLL-30-2 Advanced Medical Physics • USSKLL-30-2 Applied Medical Physics • USSJTC-30-2 Professional Aspects of Healthcare Science 	None	Dip HE Healthcare Science Credit requirements: 240

	Compulsory Modules	Optional Modules	Interim Awards
Year 3	<ul style="list-style-type: none"> USSJSJ-30-3 Healthcare Science Project <p>For FT / PT delivery</p> <ul style="list-style-type: none"> USSJSK-30-3 Professional Practice for Healthcare Science <p>OR</p> <p>For DA delivery (contains DA End Point Assessment)</p> <ul style="list-style-type: none"> USSKLM-30-3 Professional Healthcare Science Practice 	<p>Students must opt for one of the following three pathways:</p> <p>Radiation Physics</p> <ul style="list-style-type: none"> USSKLN-30-3 Advanced Radiation Physics and Nuclear Medicine USSKLQ-30-3 Practice of Radiation and Radiotherapy Physics <p>Nuclear Medicine</p> <ul style="list-style-type: none"> USSKLP-30-3 Applied Radiotherapy Physics and Nuclear Medicine USSKLN-30-3 Advanced Radiation Physics and Nuclear Medicine <p>Radiotherapy Physics</p> <ul style="list-style-type: none"> USSKLP-30-3 Applied Radiotherapy Physics and Nuclear Medicine USSKLQ-30-3 Practice of Radiation and Radiotherapy Physics <p>Due to professional portfolio requirements students will not be able to transfer between pathways within Year 3</p>	<p>BSc Healthcare Science</p> <p>Credit requirements: 300</p> <p>[Only available to students entering Year 3 from C992 UWE FdSc Healthcare Science (Medical Physics Pathway)]</p> <p>BSc(Hons) Healthcare Science (Medical Physics Technology)</p> <p>Credit requirements: 360</p>

GRADUATION

Part 5: Entry Requirements

The University's Standard Entry Requirements apply with the following additions/exceptions:

- Candidates must be in employment in a relevant role in a Medical Physics department. Note: to access funding from the employing institution's apprenticeship levy the candidate must be employed in a higher apprenticeship role (further details on the Education & Skills Funding Agency funding requirements can be found [here](#)).
- Equivalent qualifications and/or work experience may also be acceptable (refer to UWE website for requirements) and would be judged on individual merit.
- All students graduating from the UWE C992 FdSc Healthcare Science programme (with a Medical Physics specialism) will be able to enter the BSc (Hons) Healthcare Science (Medical Physics) at Level 3 (FHEQ level 6). The FdSc maps identically to the BSc at Levels 1 & 2 (FHEQ levels 4 & 5), and applies the same entry requirements.

Tariff points as appropriate for the year of entry - up to date requirements are available through the [courses database](#).

Health assessment/declaration/vaccinations. Applicants must be in good health and be up-to-date with routine immunisations e.g. tetanus, diphtheria, polio and MMR. Applicants who are offered a place will be required to complete a questionnaire and must be prepared to undergo a medical examination. Applicants will also be required to confirm their status in respect of a number of infectious diseases and immunisations (tuberculosis, measles, mumps, rubella, chicken pox, varicella, hepatitis B, hepatitis C, HIV antibodies) and be prepared to have all required vaccinations. If vaccinations are not up-to-date this will affect ability to continue on the course. Concerns with regards to vaccinations should be raised at the point of application.

Disclosure of Criminal Background. The Rehabilitation of Offenders Act 1974 does not apply and all convictions, including those which are spent, must be disclosed. This is in accordance with the Rehabilitation of Offenders Act 1974 (Exceptions) Order 1975. Applicants who are offered a place must undergo a Disclosure and Barring Service (DBS) check and will be required to complete a Disclosure Application Form. All information will be treated in confidence and only taken into account when absolutely necessary.

Part 6: Reference Points and Benchmarks

[QAA UK Quality Code for HE](#)

- Framework for higher education qualifications (FHEQ)
- Subject benchmark statements
 - Physics, Astronomy and Astrophysics (2017)

[UWE Strategy 2020](#)

[University policies](#)

[UWE Education for Sustainable Development](#)

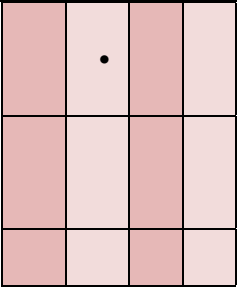
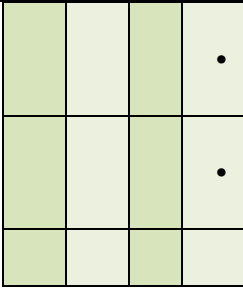
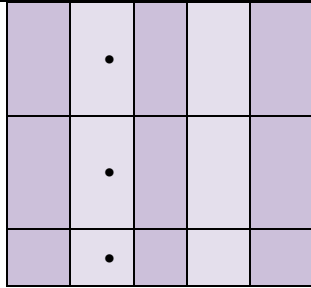
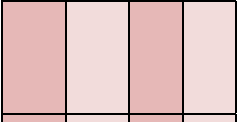
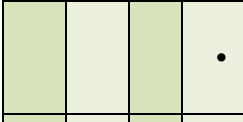
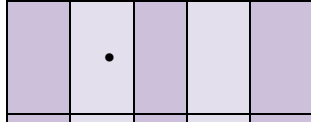

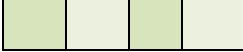
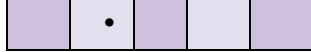
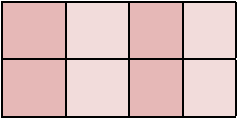
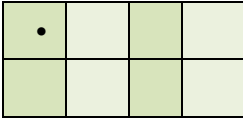
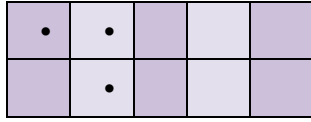
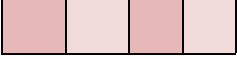
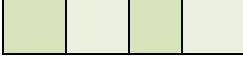
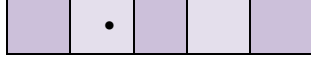
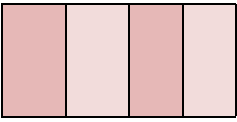
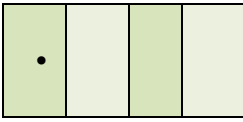
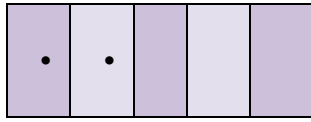



The course adheres to the professional body requirements for the:

- [National School of Healthcare Science](#) (Practitioner Training Programme in Medical Physics)
- [Institute of Physics and Engineering in Medicine](#) (Practitioner Training Programme in Medical Physics)

The course is aligned to the requirements of the Education & Skills Funding Agency [Level 6 Healthcare Science Practitioner Degree Apprenticeship Standard](#).

Appendix 1: Mapping of learning outcomes from BSc(Hons) Healthcare Science (Medical Physics Technology) to the Level 6 Healthcare Science Practitioner Degree Apprenticeship Standard											
The below table demonstrates how this award satisfies the knowledge, skills and behaviours defined in the apprenticeship standard.											
Mapping of Healthcare Science Practitioner (Apprenticeship Standard) to UWE Modules BY CORE AND SPECIALISED REQUIREMENTS											
<p>USSKLJ-30-1 Scientific Basis of Med. Physics</p> <p>USSJT6-30-1 Principles in Healthcare Science</p> <p>USSJT7-30-1 Pathophysiology of Disease</p> <p>USSJT8-30-1 Anatomy & Physiology</p>				<p>USSJT9-30-2 Scientific Practice</p> <p>USSKLIK-30-2 Advanced Medical Physics</p> <p>USSKLL-30-2 Applied Medical Physics</p> <p>USSJTC-30-2 Prof. Aspects of Healthcare Sci.</p>				<p>USSJSJ-30-3 Healthcare Science Project</p> <p>USSKLM-30-3 Prof. Healthcare Sci. Practice</p> <p>USSKLN-30-3 Adv. Rad. Phys. and Nuc. Med.</p> <p>USSKLP-30-3 App. Radio. Phys. and Nuc. Med.</p> <p>USSKLQ-30-3 Practice of Rad. and Radio. Phys.</p>			
Level 4 / Year 1				Level 5 / Year 2				Level 6 / Year 3			
								<p>Working to the standards of GSP in your area of practice apprentices will:</p>			
								<p>Person-centred Care and Professional Practice</p>			
								<p>prevent discriminatory practice against patients/carers/colleagues</p>			
								<p>ensure that the highest standards of person-centred care are practiced so that each person is treated with dignity and respect</p>			
								<p>develop effective partnerships with patients, treating patients/carers/families with kindness and compassion</p>			
								<p>identify ways of promoting good mental health/well being</p>			

Appendix 1: Mapping of learning outcomes from BSc(Hons) Healthcare Science (Medical Physics Technology) to the Level 6 Healthcare Science Practitioner Degree Apprenticeship Standard											
The below table demonstrates how this award satisfies the knowledge, skills and behaviours defined in the apprenticeship standard.											
										use appropriate language to share complex technical information with the public/patients/colleagues, including giving/receiving feedback	
										Personal and Professional Development	
											critically reflect on their technical/non-technical practice, keeping knowledge and skills updated & responding to appraisal/feedback
											work within their scope of practice as an autonomous practitioner
										promote the professional development/training of junior colleagues	
										Health, Safety And Security	
											manage delegated junior staff training in security/health/safety practices that underpin their work, especially in infection control
										undertake delegated risk assessments & implement changes	
										Quality	
											strategically plan clinical and quality management processes
										undertake delegated risk assessments & implement changes	
										Technical Scientific Services	
											independently analyse/interpret accurately clinical technical data
											be responsible for the safety and functioning of equipment
											present/explain technical results to other professionals & patients
											coordinate drafting of SOPs & updating techniques/procedures
										evaluate and implement solutions to clinical technical problems	

Appendix 1: Mapping of learning outcomes from BSc(Hons) Healthcare Science (Medical Physics Technology) to the Level 6 Healthcare Science Practitioner Degree Apprenticeship Standard The below table demonstrates how this award satisfies the knowledge, skills and behaviours defined in the apprenticeship standard.									
						Clinical Care	ensure that responsibilities for safeguarding and protecting patient confidentiality, including record keeping, are met		
							conduct sensitive discussions with patients as required, including obtaining meaningful consent		
							supervise the delivery of high quality clinical technical procedures		
						Audit/Service Improvement	manage audit and/or service improvement programme		
							act on the outcomes of audit/service improvement programmes		
						Research	use research, reasoning and problem solving skills to support quality care improvements/innovation in their area of work		
						Leadership	coordinate leadership activities across a HCS technical team		

Appendix 1: Mapping of learning outcomes from BSc(Hons) Healthcare Science (Medical Physics Technology) to the Level 6 Healthcare Science Practitioner Degree Apprenticeship Standard

The below table demonstrates how this award satisfies the knowledge, skills and behaviours defined in the apprenticeship standard.

In their scientific, technical and clinical practice apprentices will understand and apply knowledge of:

	•						•		•			
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	•						•		•			
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Person-centred Care and Professional Practice	how the NHS Constitution/GSP Standards are used to support person-centred care
	equality and diversity legislation, policies and local ways of working
	the importance of probity, honesty and integrity in all aspects of their professional practice
	the work of their department & its impact on patient care through problem solving in the team
	how to involve patients and the public in HCS and in making choices about their care
	factors impacting on mental health and how to promote mental health and well being
	how to use and teach others to use appropriate language/feedback to share information to patients/families with complex needs, including giving oral/written explanations

Appendix 1: Mapping of learning outcomes from BSc(Hons) Healthcare Science (Medical Physics Technology) to the Level 6 Healthcare Science Practitioner Degree Apprenticeship Standard The below table demonstrates how this award satisfies the knowledge, skills and behaviours defined in the apprenticeship standard.													
												Personal and Professional Development (PPD)	models of critical reflection and self-reflection to enhance the quality of patient care they provide personally and as a team leader
													the underpinning theories and benefits to staff of excellent appraisal processes
													how to lead an appraisal/performance review and support the development of an action plan
												Health, Safety And Security	legislation/policies/regulations relating to health and safety at work and their responsibilities
													risk assessment methodologies, including strategies for dissemination of the findings, and approaches to implementing the changes required
												Quality	quality management/improvement processes within the regulatory environment
													analysis, interpretation and communication of audit findings to promote quality
												Technical Scientific Services	the underpinning scientific principles of investigations offered by HCS services
													the principles and practice of equipment management, maintenance, repair and safety
													how to draft and update SOPs

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					the appropriate support available in difficult situations or when a complaint is made																																																			
					the rights of patients with regard to giving informed & meaningful consent when required																																																			
					the role and importance of the key factors influencing dignity/rights/privacy/confidentiality of patients/colleagues																																																			
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First UVP Approval Date	20 March 2018			
Revision ASQC Approval Date		Version	1	Link to CAR ID 4581
Next Periodic Curriculum Review due date				
Date of last Periodic Curriculum Review				