

Programme Title and Name of Award	MSc Medical Imaging		
Professional Qualifications / Accreditation	Anticipated to be approved by the Society and College of Radiographers (SCoR)		
Academic Level	Level 7	Total Credits	180
UCAS Code	Not Applicable	JACS Code	B821
Criteria for Admission to the Programme	<p>The University's standard criteria for admissions apply. Please refer to the Applicant Information pages of the University website for more information. For APL, please refer to the University website.</p> <p>Detailed criteria for admission to this programme can be found on the programme webpage: http://www.cumbria.ac.uk/study/courses/postgraduate/medical-imaging-msc/</p>		
Teaching Institution	University of Cumbria		
Owning Department	Medical and Sports Sciences		
Programme delivered in conjunction with	NHS and possible private sector placement providers		
Principal Mode of Delivery	Face to face and Blended Learning		
Pattern of Delivery	Part time		
Delivery Site(s)	All University of Cumbria campuses, gateway sites and approved partner locations.		
Programme Length	2 years standard & up to 5 years maximum		
Higher Education Achievement Report (HEAR)	Upon successful completion of this programme, you may receive a Diploma Supplement/Higher Education Achievement Report (HEAR).		
Exit Awards	You may be awarded one of the following Exit Awards if you fail to achieve the requirements of the full programme:		

	<p>PGDip Medical Imaging</p> <p>PGCert Medical Imaging</p> <p>If the academic credit is achieved but not the clinical element (QCPM) you may be awarded one of the following exit awards:</p> <p>MSc The Theory of Medical Imaging – 180 credits</p> <p>PGDip The Theory of Medical Imaging – 120 credits</p> <p>PGCert The Theory of Medical Imaging – 60 credits</p>
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Programme Features

The Medical Imaging programme aims to develop a variety of health professionals with roles in specialist imaging modalities such as ultrasound, magnetic resonance imaging (MRI) and general Advanced Practise for Radiographers.

There are limited post-graduate routes for radiographers working in general practice to progress and attain level 7 credits. The four tier and 'banding' system within the NHS and progression in the non NHS sector for motivated radiographers to advance in their chosen field is enhanced by demonstrating motivation to study and learn in the academic setting. Hospital managers have verbally expressed their concern at the lack of post graduate modules available that can significantly enhance practice for staff working in general radiography. These discussions have prompted this programme design and pathway. The programme includes modules that will enhance both professionalism as well as practice and allows you, the student to negotiate a bespoke programme of study that meets your own learning needs.

The Mentorship (Multiprofessional Support of Learning and Assessment in Practice – HLLM7010) module which is specific to the PGCert route allows you to develop your knowledge and skills to support the learning and assessment of students in practice, in order to develop in the role of mentor/supervisor.

The aim of the Leadership module (HLLG7006) which is specific to PGDip route is to examine the nature of leadership and in particular its role in health and social care organisations. It allows you to demonstrate an in-depth understanding of theories of management and leadership and to critically evaluate different approaches to understanding self and organisations.

This is a flexible part-time (PT) programme that will appeal to a wide range of healthcare professionals who wish to develop advanced general radiographic practice skills as an extension of their scope of practice. The MSc Medical Imaging programme and is aimed at those employed within a suitable clinical environment. This allows you to negotiate a bespoke programme of study that meets your own learning needs.

You will be supported in developing your skills to become autonomous practitioner, who is able to undertake advanced practice safely. The development of critical, analytical and evaluative skills and incorporating these into the clinical environment, encouraging evidence based practice will be a fundamental part of the course.

The principal academic staff members on the programme team are university lecturers as well as still practicing extended role radiographers clinically in the NHS or private sectors. The programme is also supported by colleagues from the wider medical science programmes at the University of Cumbria.

Learning outcomes for all modules are those that will enable practitioners to develop their skills, both clinically and academically to fulfil their role within the NHS. The programme maintains high academic standing and clinical relevance by involving senior specialist clinical practitioners in curriculum planning and delivery as well as providing mentorship support for students during any specialist clinical

placement activities.

Aims of the Programme

The overall aims of the programme are:

1. To prepare students for the next stage in their careers and improve their employability by developing their understanding and clinical expertise in the theory and application of Advanced Practice for Medical Imaging in their chosen domain.
2. To facilitate and support effective learning and develop students' abilities to reflect on their professional practice so that they will continue as independent practitioners with a commitment to lifelong learning, scholarship and research.
3. To ensure students have a comprehensive knowledge base and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their area of professional practice.
4. To ensure the students understand the role and responsibilities of mentorship in the clinical setting and are able to critically analyse and evaluate theories of learning and teaching and contemporary approaches to mentorship to facilitate learning within practice based settings.
5. To ensure the student has the skills to critically analyse and evaluate the principles of assessment and apply these to learners in practice settings with consideration to accountability and responsibility with reference to your professional code.
6. To ensure the student has the skills to critically discuss the application of evidence based practice and leadership skills in mentorship using a reflective approach.

The programme aims, at the point of graduation, to produce graduates who will be able to:

7. Practice competently according to the Health and Care Professions Council (HCPC) Standards of Practice for Radiographers* and the Society and College of Radiographers (SCoR) Code of Conduct and Ethics.
8. Critically evaluate the quality of the evidence-base and articulate difficulties related to its implementation in complex clinical situations.
9. Demonstrate clear supervision, leadership and management abilities through appropriate decision-making, resource allocation and team working.
10. Understand and apply the values enshrined within the NHS Constitution in all aspects of their professional practice.
11. Plan and be prepared to undertake research in practice.

Level Descriptors

Level Descriptors describe in general terms the expected outcomes you will achieve at each level of study as you progress through your programmes. They describe the relative demand, complexity, depth of learning and learner autonomy associated with a particular level of learning and achievement. The University's Level Descriptors are aligned to the national [Framework for Higher Education Qualifications](#) (FHEQ) and are a key mechanism for ensuring the academic standards of the University's provision.

At Level 7 (Usually Master's level), you will be able to demonstrate that you have the ability:

- To display a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of your academic discipline, field of study or area of professional practice.
- Employ advanced subject-specific and cognitive skills to enable decision-making in complex and unpredictable situations.
- Generate new ideas and support the achievement of desired outcomes
- Accept accountability for decision making including the use of supervision
- Analyse complex concepts and professional situations by means of synthesis of personal and work place reflection and data drawn from scholarship and research in the field.

Programme Outcomes – Knowledge and Understanding

The programme provides opportunities for you to develop and demonstrate the following:

After 60 credits of study (PGCert) Medical Imaging you will be able to demonstrate:

- K1.** The principles of image assessment and the formation and the relationships between tissue structure and image appearances.
- K2.** The requirements of diagnostic test requests and the advice which should be given to other health care professionals on matters of diagnostic imaging.
- K3.** The evaluation of the medico-legal implications of using imaging techniques and the subsequent dissemination of the diagnostic information provided.
- K4.** A comprehensive understanding of techniques applicable to their own research or advanced scholarship.
- K5.** A practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in their clinical domain.

After 120 credits of study (PGDip) Medical Imaging you will be able to demonstrate:

- K6.** Develop awareness of the nature of leadership and management issues in advanced radiography practice.
- K7.** Plan and carry out a research study.
- K8.** The methods used to locate, interrogate, evaluate and synthesise the evidence in their chosen area of study.
- K9.** The role of diagnostic imaging specialists in a multi-disciplinary environment.
- K10.** A comprehensive understanding of techniques applicable to their own research or advanced scholarship.
- K11.** A practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in their clinical domain.

After 180 credits of study (MSc) Medical Imaging you will be able to demonstrate:

- K12.** Plan and carry out a research study.
- K13.** A creative approach to learning in order to develop as an 'independent learner' in order to evaluate a wide range of research to gain a coherent understanding of theory and practice.

Programme Outcomes – Skills and other Attributes (including Employability Skills)

The programme provides opportunities for you to develop and demonstrate the following:

After 60 credits of study (PGCert) Medical Imaging you will be able to demonstrate:

- S1.** The capacity for enquiry, inductive and deductive reasoning and critical thinking and analysis.
- S2.** A creative and independent approach to learning contributing to peer learning and support.
- S3.** Synthesise information from a wide range of sources in order to gain a coherent understanding of the relationship between theory and practice.
- S4.** To ensure the student has the skills to critically analyse and evaluate the principles of assessment and apply these to learners in practice settings with consideration to accountability and responsibility with reference to your professional code.
- S5.** Reflect on and evaluate your own academic, professional and clinical performance, exercising autonomy in the management of your learning and recording of continuing professional development.

After 120 credits of study (PGDip) Medical Imaging you will be able to demonstrate:

- S6.** Critically evaluate research techniques/methodologies, where appropriate propose new hypotheses.
- S7.** Demonstrate key transferable skills such as; information fluency skills, appropriate communication skills and the ability to manage resources effectively in the planning, commissioning and delivery of imaging services.
- S8.** Demonstrate an in-depth understanding of theories of management and leadership and critically evaluate different approaches to understanding self and organisations.
- S9.** Manage change effectively in response to changing demands.
- S10.** Use information technology (IT) competently and appropriately to support academic studies and advanced radiographic practice.
- S11.** To ensure the student has the skills to critically discuss the application of evidence based practice and leadership skills in mentorship using a reflective approach

After 180 credits of study (MSc) Medical Imaging you will be able to demonstrate:

- S12.** Reflect on and evaluate your own academic, professional and clinical performance, exercising autonomy in the management of your learning and recording of continuing professional development.
- S13.** The ability to disseminate and communicate ideas and findings coherently.
- S14.** Develop interpersonal communication skills to develop and plan a project, in consultation with other staff and tutors.

External and Internal Reference Points

The following Subject Benchmark Statements and other external and internal reference points have been used to inform the Programme Outcomes:

Health and Care Professions Council (HCPC) professional standards in Radiography

Society and College of Radiographers (SCoR) guidelines on professional standards

Internal drivers having informed the development include:

Teaching, Learning and Assessment Strategies employed to enable the Programme Outcomes to be Achieved and Demonstrated

The programme and modules are structured to meet the needs of students and employers. Taught components of the academic modules on the programme are delivered in attendance blocks at the university followed by clinical learning blocks in the designated clinical placement. Students are supported on placement by experienced mentors who have been trained by the university. Students are also able to access UoC digital resources, library facilities, [Pebblepad](#) and Blackboard (VLE), whilst on placement. Students will also be supported by their personal tutor, who is a member of the academic team at the university. The clinical aspects of the programme are documented in the students' clinical e-portfolio and it is a requirement of the programme that students take ownership of this portfolio throughout the programme in line with professional requirements to maintain lifelong learning and to monitor and ensure clinical progress and competence.

Learning is based within academic study and professional practice, and the programme team collaborates with experienced clinical ultrasound practitioners. These practitioners perform key roles in helping to maintain the currency and relevance of the programme through their involvement in curriculum planning and delivery as well as providing mentorship support for students during placement blocks.

Learning and assessment are considered as interrelated, as the assessments enable students to demonstrate the extent to which they have achieved the learning outcome of modules and the programme of study overall. Students are supported throughout the assessment process.

There are extensive opportunities within the clinical sphere, evidenced within the clinical portfolio in the form of reflective practice, for students to engage with inter-professional learning. Examples of how this might be achieved are: through other imaging modalities/radiology reporting sessions within an imaging department or reflective practice based on working with the multi-disciplinary team (MDT) on clinical placement.

A wide range of assessment methods are used which are clinically relevant and aligned to programme and module level learning outcomes.

Intellectual, professional and key transferable skills are central to learning opportunities and assessment. Successfully undertaking modules on this programme will enhance opportunities for students in their professional careers.

Student Support

You will also be allocated a Personal Tutor. Your Personal Tutor will be proactively involved in the delivery of your programme and will have contact with you throughout your time at the University. They will support your learning and development, including tutorials and other support as outlined in the Personal Tutor Policy.

You will also be given clear sign-posting to additional support services including library services, counselling services and tutor support to ensure that you have all the information and support necessary to help you successfully complete this part time course.

Library and Student Services (LiSS)

Library and Student Services (LiSS) offer a wide range of support, including; access to library learning resources, academic skills, careers and employability, financial help, counselling, health and wellbeing and support for disabled students and those with specific learning requirements. We know that you want to get the most out of your programme, make the best use of your time and find or continue in the career you always dreamed of. Access university support and facilities easily and quickly via our [help is at hand](#) search.

The Skills@Cumbria service can help support your academic skills and success throughout your programme. The service is delivered by a team of professional Learning Enhancement Advisers within LiSS. It includes a suite of online self-help resources accessible 24/7 via the University's website and Blackboard site. It also provides group and individual advice and guidance accessible through and alongside your course and by different means such as face to face, email or virtual.

Module leaders will collaborate with LiSS advisers to ensure that your reading lists are current and items are available via the library collections. In order to maximise access, availability and usefulness, ebooks and electronic journal titles will, in most cases, be prioritised. You can access a wide range of great electronic and print content using [OneSearch](#) and you can find out more about key texts and journals for your subject by accessing the library's [subject resources webpages](#). Where appropriate, module reading lists will be made available to you electronically using the university's [online reading list system](#).

In addition to the range of guidance above, you have the opportunity to further develop your personal, academic and professional skills by taking part in a number of initiatives coordinated and delivered by LiSS Advisers:

Preparing for M Level Study

This free online pre-entry Master's level course is available free of charge through the Open Education Platform powered by Blackboard as is Head Start Plus. It provides a useful insight into the academic requirements of study at postgraduate level and is recommended to students who are about to start their PG qualification.

To access the course simply follow the link to <https://openeducation.blackboard.com/cumbria> and set-up a free account with Open Education. Once logged on, select the course free of charge and work through it at your own pace.

Career Ahead

Career Ahead is the University's Employability Award that is accessible to all of our students regardless of level or programme of study. Available free through the Careers Team in LiSS, the award gives students the opportunity to make their graduate CV stand out. Based on what employers look for in an ideal candidate, this award works with students to identify any gaps in their skill set and reflect on their experiences. It also offers the opportunity to participate in exclusive programmes and activities with real life employers. The University of Cumbria's employability award is split into three stages: Bronze, Silver and Gold, with a further Career Ahead + Platinum level. Students' engagement in extra curricula activities such as volunteering, project and charity work and peer mentoring are recognised within Career Ahead. To find out more or to register email careerahead@cumbria.ac.uk.

Programme Curriculum Map					
Academic Level	Module Code	Module Title	Credits	Module Status*	Programme Outcomes achieved
7	HMSR7120	Commenting skills for Radiographers Appendicular + Axial Skeleton	20	Core	K 1-5; S 1-5
7	HMSR7140	Commenting skills for Radiographers Chest	20	Core	K 1-5; S 1-5
7	HLLM7010	Multi-professional Support of Learning and Assessment in Practice	20	Core	K 1-8; S 1-5
7	HMSR7150	Negotiated Learning in CPD Medical Imaging 2 (Single Weighted Module)	20	Core	K 6,7,8,9,11; S 1-9
7	HMSU7074	Research Methods in Medical Imaging	20	Core	K 6-8, K10; S 1-11
7	HLLG7006	Leadership	20	Core	K 4-8; S 1-9
7	HMSU7076	Dissertation	60	Core	K 1-13; S 1-14
Notes					
<p>This programme operates in accordance with the University's Academic Regulations and Academic Procedures and Processes</p> <p>On the PGDip students choose from a selection of CPD Modules within Medical Imaging and 20 credits must be obtained from these subject specific modules or as a Negotiated Learning module (above) as agreed with the Programme Leader.</p>					
* Key to Module Statuses					
Core Modules		Must be taken and must be successfully passed			

Programme Delivery Structure: Part Time

Module Code	Module Title	Delivery Pattern	Method(s) of Assessment	Approximate Assessment Deadline
		Autumn Semester / Spring Semester / Extended / Year-Long		
HMSR7120	Commenting skills for Radiographers Appendicular + Axial Skeleton	Autumn/Spring semester	1 x essay; 1 x OSCE	November / April
HMSR7140	Commenting skills for Radiographers Chest	Spring semester	1 x essay; 1 x OSCE	July
HLLM7010	Multi-professional Support of Learning and Assessment in Practice	Extended	1 x portfolio	Dec/June

**Students exiting at this point with 60 credits and a pass in the QCPM could receive a PGCert Medical Imaging
In the case of a student successfully passing 60 academic credits but a failure in the QCPM, they may receive a PGCert The Theory of Medical Imaging award.**

HMSR7150	Negotiated Learning in CPD Medical Imaging 2 (Single Weighted Module)	Year - long	1 x essay; 1 x report	N/A
HLLG7006	Leadership	Extended	On-going assessments; 1 x report	Sep/ Jan/Apr
HMSU7074	Research Methods in Medical Imaging	Spring Semester	1 x report	March

**Students exiting at this point with 120 credits and a pass in the QCPM could receive a PGDip Medical Imaging
In the case of a student successfully passing 120 academic credits but a failure in the QCPM, they may receive a**

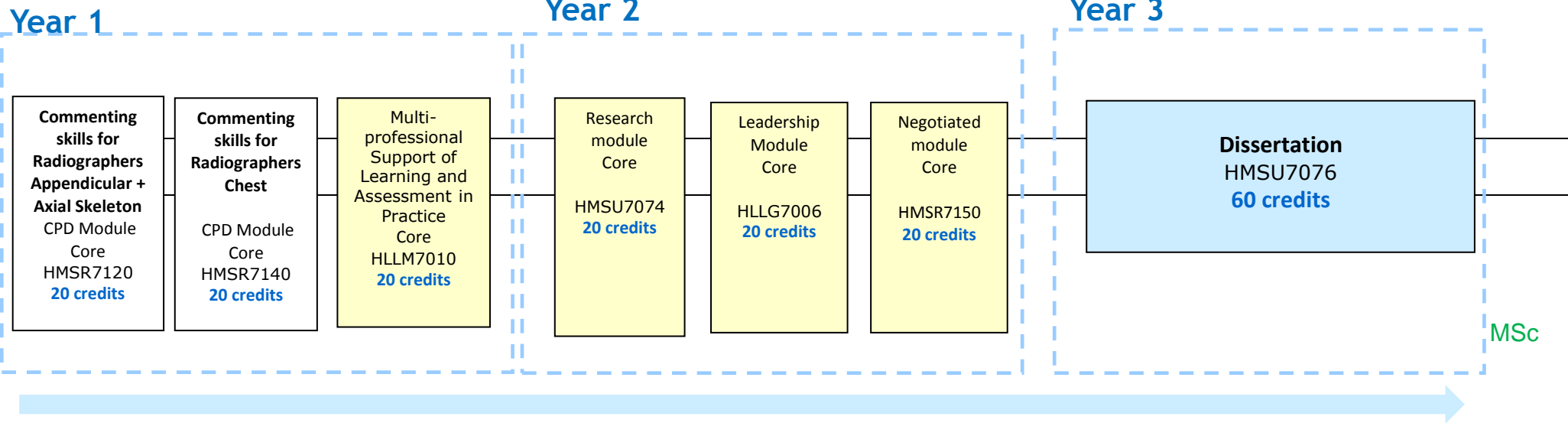
PGDip The Theory of Medical Imaging award.

HMSU7076	Dissertation	Year-long	1 x 15,000 word dissertation	N/A
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**Students exiting at this point with 180 credits and a pass in the QCPM could receive an MSc Medical Imaging
In the case of a student successfully passing 180 academic credits but a failure in the QCPM, they may receive an
MSc The Theory of Medical Imaging award.**

PART TIME MSc MEDICAL IMAGING

Students may choose from a selection of CPD Modules within Medical Imaging up to PGDip level with 60 credits obtained from the subject specific modules plus a Negotiated Learning module as agreed with the Programme Leader.



Methods for Evaluating and Improving the Quality and Standards of Learning

Mechanisms used for the Review and Evaluation of the Curriculum and Learning, Teaching and Assessment Methods

- Module Evaluation
- Programme validation and revalidation
- Annual Evaluatory Reports (AER)
- Peer Review of Teaching
- Clinical Placement Evaluations
- Online Forums (Blackboard etc)
- Student Module Evaluations (given to students on completion of each academic module)
- Personal Tutor meetings with feedback to Module and Programme Leads
- Informal discussion with students
- Staff-Student Forum Meetings (SSFs)
- Stakeholder and Steering Group meetings
- Module Assessment Boards
- University Assessment Board

Mechanisms used for gaining and responding to feedback on the quality of teaching and the learning experience – gained from: Students, graduates, employers, WBL venues, other stakeholders, etc.

- Staff Student Forum
- Module Evaluation Forms
- Programme Evaluation
- Module/Programme/Personal tutorials
- Meetings with External Examiners
- Ad hoc clinical visits from link academic tutor to placement sites to ensure programme/student/placement requirements are being met.

Date of Programme Specification Production:

October 2016

Date Programme Specification was last updated:

18 April 2017

For further information about this programme, refer to the programme page on the University website

<http://www.cumbria.ac.uk/study/courses/postgraduate/medical-imaging-msc/>