

**Programme Specification**  
**Part Time flexible/cpd pathway**

<b>Programme Title and Name of Award</b>	<b>MSc Medical Imaging (Ultrasound)</b>		
<b>Professional Qualifications / Accreditation</b>	Accredited by the Consortium for the Accreditation of Sonographic Education (CASE)		
<b>Academic Level</b>	Level 7	<b>Total Credits</b>	180
<b>UCAS Code</b>	Not Applicable	<b>JACS Code</b>	B821
<b>Criteria for Admission to the Programme</b>	<p>The University's standard criteria for admissions apply. Please refer to the <a href="#">Applicant Information</a> pages of the University website for more information. For <a href="#">APL</a>, please refer to the University website. APL will usually be granted for academic credits achieved at another CASE accredited UK ultrasound course, provided an adequate match can be made to this course. APL from other courses will be considered on a case by case basis, but must always be at the appropriate academic level and have a high match to the learning outcomes to modules on this pathway.</p> <p>Programme webpage:  <a href="https://www.cumbria.ac.uk/study/courses/postgraduate/medical-imaging-ultrasound-msc/">https://www.cumbria.ac.uk/study/courses/postgraduate/medical-imaging-ultrasound-msc/</a></p> <p>The following additional requirements apply for entry to this programme:            1st or 2nd class honours degree.</p> <p>Students with other qualifications may be admitted to the course via <b>Accreditation of Prior Learning (APL)</b> procedures.</p> <p>Selection criteria</p> <p>You will need to have at least 12 months' equivalent full-time post registration clinical experience, and you will need support from a clinical ultrasound department and access to a clinical placement in such a department for the duration of the course.</p> <p>It is the student's responsibility to ensure a suitable clinical placement is in place, prior to, and for the duration of their chosen award, and the university regrettably cannot assist students in finding or securing a clinical placement for this award, at any time during their time on the course.</p> <p>You must have access to a suitable clinical mentor and suitable</p>		

	<p>patient case load for a minimum of 21 hours per week. If a student placement is terminated for any reason, the university cannot assist the student in finding another placement. If a suitable clinical placement cannot be found in these circumstances the student will be required to withdraw from the course.</p> <p>Applicants should be eligible for registration by their respective UK professional or regulatory body e.g. Health &amp; Care Professions Council (HCPC), General Medical Council (GMC), Nursing &amp; Midwifery Council (NMC), Society of Vascular Technologist (SVT). You will also need to provide one reference in support of your application, from the department offering a clinical placement.</p> <p>You will be required to pass an element of pre-course assessment in the department sponsoring you. It is the sponsoring department's responsibility to facilitate this assessment and this will be carried out to ensure that you show an aptitude for Ultrasonography. You will need to undertake a preliminary practical assessment to demonstrate the relevant psychomotor skills such as hand-eye co-ordination, pattern recognition and spatial awareness. The assessment will be of an informal nature, carried out by experienced practitioners in your clinical placement, who will then provide a written reference of your suitability.</p> <p>Before being accepted onto the course, all applicants will be interviewed, usually by telephone. Interviewers from the course team will, amongst other attributes, be looking for a commitment to further study, an understanding of content and standard of the course and interpersonal skills.</p> <p>As part of the recruitment process, applicants may be assessed for their values using the core requirements set out in the Value Based Recruitment (VBR) Behaviour Framework as outlined in the NHS Constitution <a href="http://www.nhsemployers.org/case-studies-and-resources/2014/11/values-based-recruitment-behaviour-framework">http://www.nhsemployers.org/case-studies-and-resources/2014/11/values-based-recruitment-behaviour-framework</a></p>
<b>Teaching Institution</b>	University of Cumbria
<b>Owning Department</b>	Medical and Sport Sciences
<b>Programme delivered in conjunction with</b>	NHS and private sector placement providers
<b>Principal Mode of Delivery</b>	Face to Face and Blended Learning
<b>Pattern of Delivery</b>	Part Time
<b>Delivery Site(s)</b>	All University of Cumbria campuses, gateway sites and approved partner locations.
<b>Programme Length</b>	2 years standard & up to 5 years maximum
<b>Higher Education Achievement Report</b>	Upon successful completion of this programme, you may receive a Diploma Supplement/Higher Education Achievement Report (HEAR).

<b>(HEAR)</b>	
<b>Exit Awards</b>	<p>If you exit the MSc Medical Imaging (Ultrasound) Graduate Entry pathway early, and have passed all of the academic and clinical components required you may be awarded:</p> <p>PGDip Medical Imaging (Ultrasound) Graduate Entry</p> <p>PGCert Medical Imaging (Ultrasound) Graduate Entry</p> <p>You may be awarded one of the following Exit Awards if you fail to achieve the requirements of the clinical components but pass the academic components: <b>(Not CASE accredited)</b></p> <p>MSc The Theory of Medical Imaging Ultrasound</p> <p>PGDip The Theory of Medical Imaging Ultrasound</p> <p>PGCert The Theory of Medical Imaging Ultrasound</p> <p>A CoA in any specific modules passed <b>(Not CASE accredited)</b></p>

<b>Programme Features</b>	
<p>This is a highly flexible part-time (PT) pathway that will appeal to a wide range of healthcare professionals who wish to develop ultrasound skills as an extension of their scope of practice. This pathway sits within the MSc Medical Imaging (Ultrasound) programme and is aimed at those employed within a suitable clinical environment. This pathway is open to registered health care professionals, or vascular scientists, who wish to undertake ultrasound training as a career development or as an extension of their existing clinical role. The PT pathway is highly flexible, and offers a number of CASE accredited interim awards. This allows students to negotiate a bespoke programme of study that meets their own learning needs. Students on this pathway must have the support of a suitable clinical placement prior to being accepted onto the course, and this must remain in place for the duration of their chosen award.</p> <p>The pathway allows students to develop the knowledge and skills required to become a competent sonographer and it is accredited by the <u>Consortium for the Accreditation of Sonographic Education</u> (CASE) ensuring it meets national standards commensurate with similar/equivalent courses across the United Kingdom (UK).</p> <p>The academic components for this pathway shares all modules within the medical imaging (ultrasound) programme. The programme is taught by a team of experienced ultrasound practitioners both in the university and clinical setting. Top of the range ultrasound equipment and test phantoms, as well as simulated practice facilities (Medaphor Scan Trainer), are available at the university to prepare students for their time on clinical placement. We currently have the largest Medaphor ultrasound simulation lab in the world, which is an excellent advantage for our students. Some of the formative clinical assessments will be performed using the Scan Trainer technology, ensuring students are confident in a range of basic skills before even attempting to scan a patient. It is envisaged that the use of simulated practice will be developed further, with possible opportunities to develop 'cloud based' shared/distance learning activity with other universities and practitioners. The ultrasound machines and practice simulators are housed in a purpose built skills lab, where students will be able to consolidate their theoretical knowledge and practical skills during the academic blocks at university, ensuring they are adequately prepared with the appropriate skills, prior to each placement block.</p> <p>Students will be supported in developing their skills to become autonomous practitioners, who are able to undertake advanced practice safely, by ensuring clinical competencies achieved meet national standards. Students will have the opportunity for inter-professional learning, during clinical placement</p>	

through the sharing of best clinical practice. 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 clinical placement sites have been working with the university for many years, supporting students through the traditional part-time route for sonographers, and have friendly, supportive and experienced staff to help them develop their clinical skills whilst maintaining strong links with the university.

The principal academic staff members on the programme team are university lecturers as well as still practicing ultrasound 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.

The programme is supported by a wide range of locally and nationally respected ultrasound professionals and physicists who act as honorary lecturers of the University of Cumbria and provide advice on the programme content and contribute to the programme delivery.

The programme team are respected nationally in their field and are currently research active. The team are actively involved in the development and maintenance of ultrasound education at a national level.

## **Aims of the Programme**

The overall aims of the Programme are:

1. To prepare students for a career in medical ultrasound by developing their understanding and clinical expertise in the theory and application of medical ultrasound.
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 understanding of ultrasound, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their areas of professional practice.
4. To develop the students' enthusiasm for, and knowledge and understanding of, the continually expanding field of medical ultrasound by developing the transferable skills expected of the postgraduate student in health care who is able to recognise the interface between academic and applied clinical working and is able to manage and adapt to the rapidly changing technological, medico-legal and ethical frameworks of the National Health Service.
5. To ensure the students are both safe and proficient for first post competence (both in a subject specific way and having the evidence based techniques in their grasp to practice into the future as lifelong learners) in three or four clinical specialisms.

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

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

10. Plan and be prepared to undertake research in practice

*\*Where relevant to the role of 'Sonographer' and should this title should become protected and registerable with the Health and Care Professions Council (HCPC).*

## 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) you will be able to demonstrate:**

**K1.** A detailed understanding of physical principles of ultrasound image formation and the relationships between tissue structure and associated image appearances.

**K2.** The requirements of diagnostic ultrasound requests and the advice which should be given to other health care professionals on matters of diagnostic imaging.

**K3.** The justification and critical analysis of the use of particular imaging modalities in different clinical situations.

**K4.** The evaluation of the medico-legal and ethical implications of using imaging techniques and the subsequent dissemination of the diagnostic information provided. The role of medical ultrasound practitioners/clinical specialists in a multi-disciplinary environment.

**K5.** The psycho-social effects of medical imaging on the patient and their partner/carer.

**K6.** The methods used to locate, interrogate, evaluate and synthesise the evidence in their chosen area of study.

**K7.** Demonstrate skilled, competent, reflective and safe ultrasound practice within a legal and ethical context in line with current local and national UK guidelines.

**K8.** 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.

**K9.** Utilise appropriate strategies to solve complex problems and make evaluative judgements on the outcomes of ultrasound examinations and report findings accordingly.

**K10.** Recognise and act accordingly in situations where the limits of skill or knowledge are being approached (cognisance).

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

**K11.** A wide range of clinical practice in a range of specialist clinical areas.

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

**K12.** A comprehensive understanding of techniques applicable to their own research or advanced scholarship.

**K13.** To understand and apply the values enshrined within the NHS Constitution in all aspects of their professional practice.

**K14.** Plan and be prepared to undertake research in 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) 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.** Critically evaluate research techniques/methodologies, where appropriate propose new hypotheses.

**S5.** 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.

**S6.** The ability to disseminate and communicate ideas and findings coherently.

**S7.** Manage change effectively in response to changing demands.

**S8.** 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.

**S9.** The use of information technology (IT) competently and appropriately to support academic studies and ultrasound practice.

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

**S.10.** Clinical competence in a broad range of ultrasound specialisms.

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

**S11.** An ability to critically evaluate and synthesise key and peripheral primary and secondary sources.

**S12.** An ability to organise and structure critical discussion and supporting evidence into a coherent project that generates new ideas and thinking.

**S13.** An ability to disseminate findings to your wider community of professional practice.

## 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:

The academic and clinical modules have been mapped against the Consortium for the Accreditation of Sonographic Education (CASE) recommended learning outcomes.

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

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

British Medical Ultrasound Society (BMUS) guidelines

Internal drivers having informed the development include:

University Academic Strategy 2014-20;

Departmental Business Plan for Medical and Sport Sciences;

Departmental response to Learning, Teaching and Assessment Strategy 2014-17

## 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, and formative and summative assessment will be undertaken, and will be an integral part of the academic and clinical modules for ultrasound.

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: by following the patient pathway in an obstetric/gynaecology clinic, or 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

Students will be supported by a named mentor for the duration of their course. Mentors will be offered training and support by the course team. All students on the course will normally receive a placement visit by a member of the course team. If further visits are required, a charge may be applicable for remote sites.

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.

A comprehensive support network is also in place as articulated in your Placement Handbook.

### 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](mailto:careerahead@cumbria.ac.uk).

<b>Programme Curriculum Map PT</b>					
<b>Academic Level</b>	<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>	<b>Module Status*</b>	<b>Programme Outcomes achieved</b>
7	HMSU7062	Physical Principles & Technology in Ultrasound	20	Core	K1,K3, S1, S2, S3, S5, S6, S7, S9
7	HMSU7063	Professional, Legal & Ethical Issues in Ultrasound	20	Core	K2, K3, K4, K5, K6, K8, K9, S1, S2, S3, S5, S6, S7, S8, S9
7	HMSU7064	Obstetric Ultrasound (Theory)	20	Optional	K2, K3, K4, K6, K7, K8, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU9064	Obstetric Ultrasound (Clinical Practice)	0	Qualificatory Unit	K1, K2, K3, K4, K5, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU7065	Gynaecological Ultrasound (Theory)	20	Optional	K2, K3, K4, K6, K7, K8, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU9065	Gynaecological Ultrasound (Clinical Practice)	0	Qualificatory Unit	K1, K2, K3, K4, K5, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU7066	General Medical Ultrasound(Theory)	20	Optional	K2, K3, K4, K6, K7, K8, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU9066	General Medical Ultrasound (Clinical Practice)	0	Qualificatory Unit	K1, K2, K3, K4, K5, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU7067	Vascular Ultrasound (Theory)	20	Optional	K2, K3, K4, K6, K7, K8, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10

7	HMSU9067	Vascular Ultrasound (Clinical Practice)	0	Qualificatory Unit	K1, K2, K3, K4, K5, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU7068	Musculoskeletal Ultrasound (Theory)	20	Optional	K2, K3, K4, K6, K7, K8, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU9068	Musculoskeletal Ultrasound (Clinical Practice)	0	Qualificatory Unit	K1, K2, K3, K4, K5, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU7069	Breast Ultrasound	20	Optional	K2, K3, K4, K6, K7, K8, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU9069	Breast Ultrasound (Clinical Practice)	0	Qualificatory Unit	K1, K2, K3, K4, K5, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU7070	Negotiated Ultrasound Practice 1	20	Optional	K2, K3, K4, K6, K7, K8, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU9070	Negotiated Ultrasound Practice 1 (Clinical Practice)	0	Qualificatory Unit	K1, K2, K3, K4, K5, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU7071	Negotiated Ultrasound Practice 2	20	Optional	K2, K3, K4, K6, K7, K8, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU9071	Negotiated Ultrasound Practice 2 (Clinical Practice)	0	Qualificatory Unit	K1, K2, K3, K4, K5, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU7072	Negotiated Ultrasound Practice 3	20	Optional	K2, K3, K4, K6, K7, K8, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10

7	HMSU9072	Negotiated Ultrasound Practice 3 (Clinical Practice)		Qualificatory Unit	K1, K2, K3, K4, K5, K9, K10, K11, S1, S2, S3, S5, S6, S7, S8, S9, S10
7	HMSU7073	Independent Study in Ultrasound (non-Clinical Practice)	20	Optional	K6, K7, K8, K10, K12, K13, S1, S2, S3, S4 S5, S6, S7, S8, S9
7	HMSU7074	Research methods	20	Optional See notes	K6, K7, K8, K10, K12, K13, K14, S1, S2, S3, S4, S5, S6, S7, S8, S9
7	HMSU7075	Dissertation (40 credit)	40	Optional See notes	K6, K7, K8, K10, K12, K13, K14, S1, S2, S3, S4, S5, S6, S7, S8, S9, S11, S12, S13
7	HMSU7076	Dissertation (60 credit)	60	Optional See notes	K6, K7, K8, K10, K12, K13, K14, S1, S2, S3, S4, S5, S6, S7, S8, S9, S11, S12, S13

## Notes

This programme operates in accordance with the University's Academic Regulations and Academic Procedures and Processes

Optional modules may be subject to availability and viability.

Optional modules cannot be condoned, i.e. it is not possible to carry a fail for the optional modules, they must be successfully passed at 50%.

The optional modules on this pathway are selected in collaboration of the university, student and allocated placement provider. This may vary from placement to placement and year to year dependent on the needs of the local service and availability of suitable patient caseload and mentor.

HMSU7062 and HMSU7063 are core modules and should normally be studied in the first semester, of registration.

If research methods has not already been studied as part of the PgD, HMSU7074 Research Methods must be chosen, followed by the 40 credit Dissertation module HMSU7075. If research methods has already been studied as part of the PgD (or APL thereof), you must choose either the 60 credit Dissertation module HMSU7076, or a 20 credit optional module and the 40 credit Dissertation module HMSU7075.

Each clinical module has an associated Clinical Practice Module, which is a co-requisite and is shown underneath it's associated clinical module in the above table, and must always be taken in conjunction with each other.

**\* Key to Module Statuses**

Core Modules	Must be taken and must be successfully passed
Compulsory Modules	Must be taken although it may possible to carry as a marginal fail (if the award permits)
Optional Modules	Are a set of modules from which you will be required to choose a set number to study. Once chosen, unless indicated otherwise in the table above, an optional module carries the same rules as a compulsory module as per the Academic Regulations
Qualificatory Units	These are non- credit-bearing pass/fail components that are used to satisfy relevant professional, statutory or regulatory body professional requirements that are associated with the programme

<b>Programme Delivery Structure: Part Time / Block</b>				
<b>Module Code</b>	<b>Module Title</b>	<b>Delivery Pattern</b>	<b>Method(s) of Assessment</b>	<b>Approximate Assessment Deadline</b>
		<b>Autumn Semester / Spring Semester / Extended / Year-Long</b>		
HMSU7062	Physical Principles & Technology in Ultrasound	Spring Semester	Coursework/Exam	October
HMSU7063	Professional, Legal & Ethical Issues in Ultrasound	Spring Semester	Coursework	June
HMSU7064	Obstetric Ultrasound (Theory)	Autumn Semester	Coursework/Exam	January
HMSU9064	Obstetric Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	September
HMSU7065	Gynaecological Ultrasound (Theory)	Autumn Semester	Coursework/Exam	March
HMSU9065	Gynaecological Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	November
HMSU7066	General Medical Ultrasound (Theory)	Spring Semester	Coursework/Exam	August
HMSU9066	General Medical Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	April
HMSU7067	Vascular Ultrasound (Theory)	Spring Semester	Coursework/Exam	August
HMSU9067	Vascular Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	April
HMSU7068	Musculoskeletal Ultrasound (Theory)	Autumn Semester	Coursework/Exam	January
HMSU9068	Musculoskeletal Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	September
HMSU7069	Breast Ultrasound (Theory)	Year Long	Presentation/Viva	Negotiated
HMSU9069	Breast Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	Negotiated

HMSU7070	Negotiated Ultrasound Practice 1 (Theory)	Year Long	Portfolio/Negotiated	Negotiated
HMSU9070	Negotiated Ultrasound Practice 1 (Clinical Practice)	Year Long	Clinical Portfolio	Negotiated
HMSU7071	Negotiated Ultrasound Practice 2 (Theory)	Year Long	Portfolio/Negotiated	Negotiated
HMSU9071	Negotiated Ultrasound Practice 2 (Clinical Practice)	Year Long	Clinical Portfolio	Negotiated
HMSU7072	Negotiated Ultrasound Practice 3 (Theory)	Year Long	Portfolio/Negotiated	Negotiated
HMSU9072	Negotiated Ultrasound Practice 3 (Clinical Practice)	Year Long	Clinical Portfolio	Negotiated
<p><b>Students exiting at this point with 60 credits, including the 2 core modules and a pass in ONE clinical 'theory' module and passes in the associated Clinical Practice module, would receive a PGCert Medical Imaging (Ultrasound).</b></p> <p><b>In the case of a student successfully passing 60 academic credits including the 2 core modules and ONE optional theory module but a failure in the associated Clinical Practice Module, they may receive a PGCert The Theory of Medical Imaging Ultrasound</b></p>				
HMSU7064	Obstetric Ultrasound (Theory)	Autumn Semester	Coursework/Exam	January
HMSU9064	Obstetric Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	September
HMSU7065	Gynaecological Ultrasound (Theory)	Autumn Semester	Coursework/Exam	March
HMSU9065	Gynaecological Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	November
HMSU7066	General Medical Ultrasound (Theory)	Spring Semester	Coursework/Exam	August
HMSU9066	General Medical Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	April
HMSU7067	Vascular Ultrasound (Theory)	Spring Semester	Coursework/Exam	August
HMSU9067	Vascular Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	April

HMSU7068	Musculoskeletal Ultrasound (Theory)	Autumn Semester	Coursework/Exam	January
HMSU9068	Musculoskeletal Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	September
HMSU7069	Breast Ultrasound (Theory)	Year Long	Presentation/Viva	Negotiated
HMSU9069	Breast Ultrasound (Clinical Practice)	Year Long	Clinical Portfolio	Negotiated
HMSU7070	Negotiated Ultrasound Practice 1 (Theory)	Year Long	Portfolio/Negotiated	Negotiated
HMSU9070	Negotiated Ultrasound Practice 1 (Clinical Practice)	Year Long	Clinical Portfolio	Negotiated
HMSU7071	Negotiated Ultrasound Practice 2 (Theory)	Year Long	Portfolio/Negotiated	Negotiated
HMSU9071	Negotiated Ultrasound Practice 2 (Clinical Practice)	Year Long	Clinical Portfolio	Negotiated
HMSU7072	Negotiated Ultrasound Practice 3 (Theory)	Year Long	Portfolio/Negotiated	Negotiated
HMSU9072	Negotiated Ultrasound Practice 3 (Clinical Practice)	Year Long	Clinical Portfolio	Negotiated
HMSU7073	Independent Study in Ultrasound (non-clinical)	Year Long	Project	Negotiated
HMSU7074	Research Methods	January	Coursework	April
<p><b>Students exiting at this point with 120 academic credits, including the 2 core modules and at least 3 clinical 'theory' modules and passes in the 3 associated Clinical Practice modules would receive a PGDip Medical Imaging (Ultrasound).</b></p> <p><b>In the case of a student successfully passing 120 academic credits along with passes in 1 or 2 Clinical Practice modules, they will receive a PGCert Medical Imaging (Ultrasound) and an academic transcript detailing the modules and academic credit completed.</b></p> <p><b>In the case of a student successfully passing 120 academic credits (including the 2 core modules) but a failure in 3 Clinical Practice modules they may receive a PGDip The Theory of Medical Imaging Ultrasound award.</b></p>				
HMSU7074	Research Methods	January	Coursework	April



HMSU7075	Dissertation Module	Year Long	Dissertation	September
HMSU7076	Dissertation Module	Year Long	Dissertation	September

**Students exiting at this point with 180 credits, including the 2 core modules and at least 3 clinical 'theory' modules and passes in the 3 associated Clinical Practice modules, will receive an MSc Medical Imaging (Ultrasound).**

**If a student passes 180 credits, including the 2 core modules and 3 clinical 'theory' modules and passes in only 1 or 2 associated Clinical Practice modules they will receive a PGCert Medical Imaging (Ultrasound) and a transcript noting the additional modules and academic credit completed.**

**If a student passes 120 academic credits least 3 clinical 'theory' modules and passes in the 3 associated Clinical Practice modules, they will receive a PGDip Medical Imaging (Ultrasound).**

**If a student passes 120 academic credits but passes 1 or 2 Clinical Practice modules, they will receive a PGCert Medical Imaging (Ultrasound) and a transcript noting the additional modules and academic credit completed.**

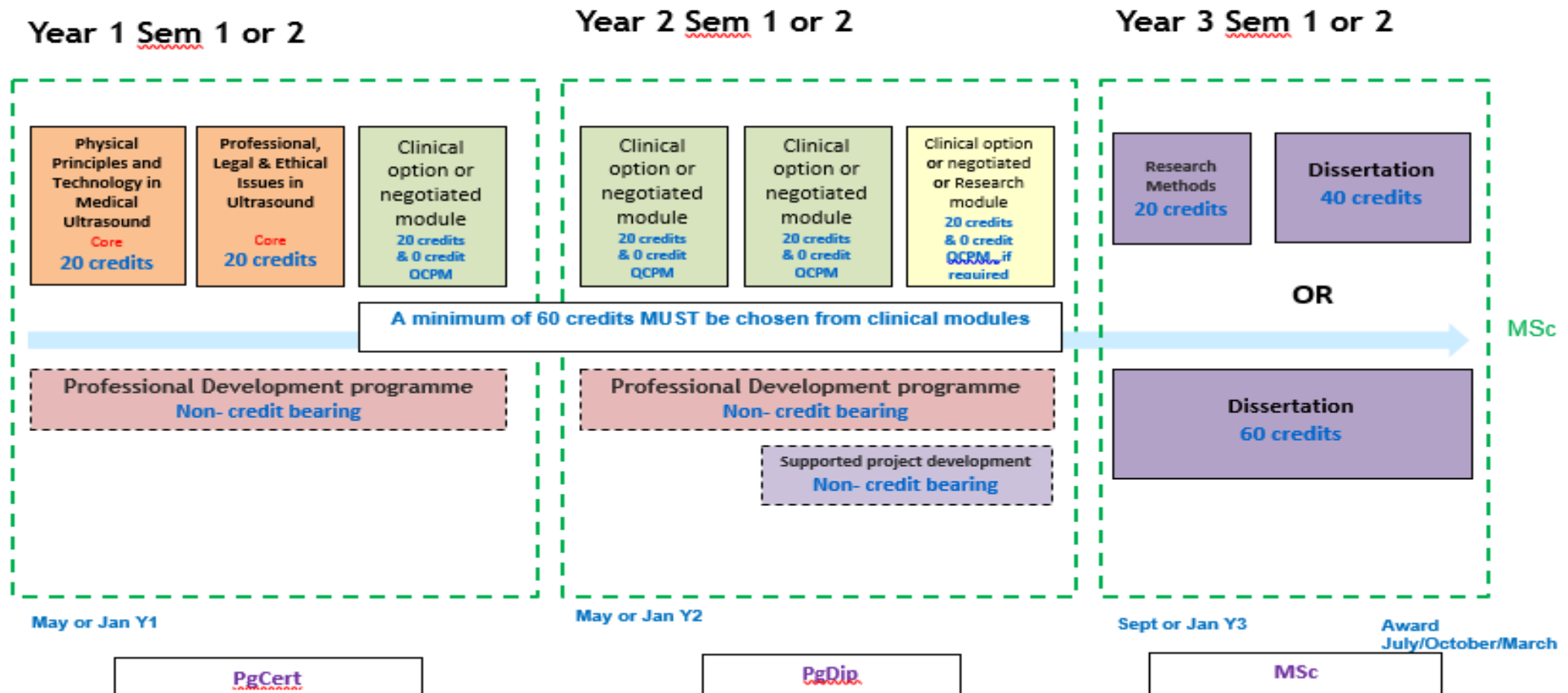
**In the case of a student successfully passing 120 academic credits (including the 2 core modules) but a failure in all Clinical Practice, modules they may receive a PGDip The Theory of Medical Imaging Ultrasound award.**

**In the case of a student successfully passing 180 academic credits (including the 2 core modules) but a failure in all Clinical Practice, modules they may receive an MSc The Theory of Medical Imaging Ultrasound award.**

# Part Time MSc Medical Imaging (Ultrasound) Pathway Proposed time line



Students enrolled to the part time pathway will usually complete the MSc in 3 to 5 standard academic years.



This is a flexible ultrasound pathway where students, in conjunction with their sponsoring placement and with approval from the programme leader, can have a degree of flexibility in the order in which they complete their modules. You will usually complete the two core modules first and then a series of optional modules. Some examples of potential student pathways taking various options are provided below (Module dates may be subject to change):

**Part-time student pathways**

1. PgCert Medical Imaging (Ultrasound)

You may wish to complete a PgCert with one clinical option and therefore you may opt for the following:

i. A Midwife/Radiographer focusing on Obstetric Ultrasound

Module	Start	Assessment	Provisional Feedback
HMSU7062	May	Coursework: September Exam: October	October/November
HMSU7064	September	Coursework: December Exam: January	February
HMSU7063*	January	Coursework x2: April/May	May
*Students may opt to take this in October instead but will be warned of the intensity of the study deadlines			

ii. A vascular Scientist/Radiographer focusing on vascular ultrasound

Module	Start	Assessment	Feedback
HMSU7062**	May or October	Coursework: March Exam May	April & June
HMSU7063*	October or January	11/01/2019	Feb 2019
HMSU7067	19 March 2019	CW 29/06/2019 Exam August 2019	July/Sept 2019 20 working days
<p>*Students may opt to take this in October instead but will be warned of the intensity of the study deadlines if taking this option  ** Students may opt to take this by starting earlier in May</p>			

iii. A physiotherapist focusing on musculoskeletal ultrasound:

Module	Start	Assessment	Feedback
HMSU7062	May	Coursework: September Exam: October	October/November
HMSU7068	September	January	February
HMSU7063*	January	April x2	May
<p>*Students may opt to take this in October instead but will be warned of the intensity of the study deadlines if choosing this option</p>			

iv. A student taking an 80 credit PgCert focusing on Obsetric & Gynaecological ultrasound:

Module	Start	Assessment	Feedback
HMSU7062	May	Coursework: September Exam: October	October/November
HMSU7064	September	Coursework: December Exam: January	February
HMSU7065	November	Coursework: February Exam: March	March/April
HMSU7063*	January	April/May	May/June
*Students may opt to take this in October instead but will be warned of the intensity of the study deadlines			

2. PgDip Medical Imaging (Ultrasound)

A student wishing to complete a PgDip with three, or four clinical options may opt for the following:

Module	Start	Assessment	Feedback
HMSU7062	May	Coursework: September Exam: October	October/November

HMSU7064	September	January	February
HMSU7065**	November	Coursework: February Exam: March	March/April
HMSU7063*	January	April/May	May/June
HMSU7066	March	Coursework: June Exam: August	July/September
HMSU7068***	September	Coursework:December Exam: January	February
HMSU7074***	January	April	May
<p>*Students may opt to take this in October instead but will be warned of the intensity of the study deadlines</p> <p>** student may opt to take this in year 2 – similar equivalent dates of attendance and assessment</p> <p>*** students may choose an additional clinical module or the research methods module</p>			

### 3. MSc Medical Imaging (Ultrasound)

A student wishing to complete a MSc with three, or four clinical options may opt for the following:

Module	Start	Assessment	Feedback
HMSU7062	May	Coursework: September Exam: October	October/November
HMSU7064	September	January	February

HMSU7065**	November	Coursework: February Exam: March	March/April
HMSU7063*	January	April/May	May/June
HMSU7066	March	Coursework: June Exam: August	July/September
HMSU7068***	September	Coursework:December Exam: January	February
HMSU7074***	January	April	May
HMSU7075/76	Sept 2020	July 2021	August 2021
<p>*Students may opt to take this in October instead but will be warned of the intensity of the study deadlines</p> <p>** student may opt to take this in year 2 – similar equivalent dates of attendance and assessment</p> <p>*** students may choose an additional clinical module or the research methods module</p> <p>Students will choose either the 40/60 credit dissertation to make up the credits to the required 180 credits for the full award. Research methods must be chosen as part of the MSc if not taken at PgDip level.</p>			

## 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
- Academic Quality and Standards Committee (AQSC)
- 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
- Regular clinical visits from link academic tutor to placement sites to ensure programme/student/placement requirements are being met, visits being undertaken at least once a semester

### Date of Programme Specification Production:

October 2016

### Date Programme Specification was last updated:

12 April 2017

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

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