



AECC
University College
*Transforming lives
through Health Sciences*

MSc Medical Ultrasound Course Specification

Version 2.0

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Record of Modifications

Description of Modification	Date approved	Cohort(s) to which modification applies

Title of course: MSc Medical Ultrasound

This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided.

Courses, major changes to courses and modifications to courses are approved following consideration through the University College's Course Approval and Review processes or Course and Unit Modification procedure, as appropriate. It is, however, expected that courses change over time, for example as a result of changes to professional accreditation requirements, in response to feedback from academic staff and students, and through annual review processes. Any such changes will be discussed with and communicated to students in an appropriate and timely manner.

Basic Course Information

Awarding Institution	AECC University College
Final award, title and credits	MSc Medical Ultrasound 180 Level 7 Credits (90 ECTS)
Interim exit awards, titles and credits	PgCert Medical Ultrasound 60 Level 7 Credits (30 ECTS) PgDip Medical Ultrasound 120 Level 7 Credits (60 ECTS)
FHEQ level of final award	7
Mode of study	Part-time
Accreditation details	Professional accreditation: Consortium for Accreditation of Sonographic Education (CASE) For a period of six years with effect from February 2018.
Standard length of course	Normally 3-4 years
Minimum and maximum periods of study	Minimum 2-3 years, Maximum 5 years.
Language of delivery	English
Place of delivery	AECC University College Norway
UCAS code (where applicable)	n/a
HESA JACS (Joint Academic Coding System) Code(s) per course/pathway	B800
Date Framework /Course initially validated	Programme initially approved as award of Bournemouth University April 2008. Approved as award of the AECC University College July 2017.
Date of first intake	10/2018
Version number of this Framework/Course Specification	2.0
Date this version approved/intake to which this applies	27 June 2018/October 2018
Author	W Foster, P Hussain, J Bolton, ML Thiel

Course Overview

1. Admissions regulations and entry requirements

The regulations for this Course are the AECC University College's Standard Admission Regulations which may be found from the [Latest Policies webpage](#). These regulations include the entry requirements and specific requirements regarding English language.

Applicants must complete to the satisfaction of the Course Leader a Clinical Placement Agreement Form (approved by the workplace practice educator confirming the requirements of the role and provision of required resources and supervision).

Recognition of Prior Learning (RPL)

AECC University College has a Recognition of Prior Learning Policy which can be found from the [Latest Policies webpage](#). Focused Short Courses are not eligible for RPL consideration.

2. Aims of the course

This course aims to enable students to attain application-specific skills in diagnostic ultrasound ensuring safe and competent practice for entry to the profession as a reflective and critical practitioner. This aligns with Master's degree characteristic statements for 'professional/practice' (QAA 2016). As part of this process, the course aims to enable students to:

- acquire in-depth knowledge and understanding in diagnostic ultrasound aligned to new developments and current empirical evidence
- acquire clinical skills for safe and competent practice in ultrasound
- advance professional practice through critical evaluation and critical reflection on documentary (practice) evidence and empirical (research) evidence
- plan and conduct an in-depth scientific investigation in a topic area relevant to diagnostic ultrasound
- develop continual learning and professional development strategies.

3. Intended Learning Outcomes

These are based on level 7 descriptors (QAA Framework for higher education qualifications in England, Wales and Northern Ireland (August 2008) and on QAA Characteristics Statement Master's Degree (September 2015)

Subject Knowledge and Understanding

Having successfully completed this course students will be able to demonstrate systematic understanding and in-depth knowledge of:

- A1 the science, operation and appropriate selection of ultrasound equipment
- A2 professional responsibility in safe and ethical ultrasound practice
- A3 the relevant anatomy and pathology in a named clinical application(s)
- A4 the techniques and use of diagnostic ultrasound in a named clinical application(s)
- A5 how methodologies of research and audit enquiry are used to create and interpret knowledge (*MSc stage only*).

Intellectual Skills

Having successfully completed this course students will be able to:

- B1 critically reflect on the practice of diagnostic ultrasound
- B2 critically evaluate research and experiential evidence so as to develop reasoned arguments and arrive at valid conclusions
- B3 apply new knowledge and insight to inform and change professional practice

3. Intended Learning Outcomes

- B4 make sound diagnostic decisions from a range of information sources including ultrasound images
- B5 synthesise existing knowledge and practice to identify areas amenable to research and other forms of investigation (*MSc stage only*).

Practical Skills

Having successfully completed this course students will be able to:

- C1 demonstrate new skills for safe and competent ultrasound practice
- C2 acquire high quality ultrasound images
- C3 effectively and sensitively communicate findings and conclusions to peers, colleagues and patients
- C4 demonstrate the ability to seek second and expert opinion
- C5 plan and undertake an original and systematic line of enquiry to inform professional practice (*MSc stage only*).

Transferable skills

Having successfully completed this course students will be able to:

- D1 reflect on professional practice and think and write critically
- D2 make reasoned judgements based on a range of evidence sources and in the absence of complete information
- D3 acquire the ability to learn independently necessary for continuing professional development.

Course Structure

4. Outline of course content

This course provides an education and training to healthcare professionals in diagnostic ultrasound at level 7. Irrespective of the optional units chosen, the course combines skills-based units enabling the acquisition of knowledge and practical competencies in diagnostic ultrasound in a range of clinical applications together with units developing skills in reflective and critical practice and scientific investigation. The course is intended for healthcare professionals employed in their respective working communities to acquire new knowledge and skills for entry to practice as a sonographer.

In the academic context, this is a Level 7 course requiring critical thinking skills at all stages of the course. These skills are mostly demonstrated in critical writing skills.

In the case of safe and competent practice skills, these can be acquired in a range of named clinical applications in diagnostic ultrasound. The course is designed to be flexible to the individual needs of practitioners working in different disciplines, enabling them to acquire diagnostic and other ultrasound skills in different body parts and techniques. Ultrasound is an increasingly used clinical skill, and this course is responsive to employers' needs as well as those of individual practitioners.

All students graduate with the same award, i.e. PgCert/PgDip/MSc Medical Ultrasound. It is the academic transcript that clearly shows the specific skills attainment and academic profile of the student. This is in line with other similar courses in the sector, and common practice to inform employers of the specific competencies attained.

5. Placements, work-based learning or other special features of the course

In order to acquire the practical skills, students must submit a Clinical Placement Agreement Form at the time of application for the relevant skills-based units. This Form must be completed to the satisfaction of the programme leader at the stage prior to acceptance on the course/unit. This form ensures that the student has the opportunity to fulfil the practical skills requirements of the course in

5. Placements, work-based learning or other special features of the course

his/her workplace. It is the responsibility of the student and not the institution to ensure that these opportunities are both available and sufficient to meet the requirements of the course.

6. Course structure, levels, units credit and award

The level of study, units and credits required for the course and for final and exit awards are set out in the **course diagram** provided as [Appendix 1](#).

The **learning outcomes mapping document** at [Appendix 2](#) shows the relationship between ILOs for units and the overarching ILOs of the course.

Learning, Teaching and Assessment

7. Learning and teaching strategies and methods

A range of teaching and learning methods are used. The primary learning environment is the workplace or clinical placement setting where practical skills are mostly attained. The student is expected to adopt self-directed learning strategies in which individual learning needs are identified within the individual's own professional practice, learning achieved by appropriate means, and learning outcomes applied to meet these needs and change practice. This reflective and critical thought learning model specifically demonstrates the transferable skills (D1-D3) and is mostly evident in the written coursework (B1-B5). Students are required to attend for formal lectures and presentations (A1-A5), as well as for practical demonstrations and practical hands-on workshops (C1-C4). Learning experiences in the clinical setting achieve many of the intellectual and practical skills associated with safe and ethical ultrasound practice (B4, C1-C4). Learning by undertaking a research study or clinical audit under supervision in the final stage achieves knowledge and skills in empirical data collection, analysis and interpretation generating original knowledge in the form of answers to research questions or recommendations based on review of current practice against pre-determined standards (B5 and C5).

8. Assessment strategies and methods

ILOs A1-A4, B1-B4, D1-D3 are assessed in critical reflective written accounts in which critical thinking and critical writing skills are demonstrated. Clinical competency is assessed by a record of clinical cases and a practical assessment (A1-A4, B4, C1-C4). The research/audit protocol and dissertation/clinical audit assess A5, B1, B3, B5, C5, D1- D3.

Students receive feedback (summative) on their written work through an assessment feedback form which grades individual assessment criteria and gives an overall grade for the work. In addition to the grade students receive literal feedback through the open comments box. In specified units students are given the opportunity to submit a draft of their work for feedback before their final submission. Students receive feedback immediately after their practical examinations by engaging with their assessor. In particular, detailed feedback is provided in cases where remedial work is necessary.

9. Learning hours

AECC University College courses are composed of units of study, which are assigned a credit value indicating the amount of learning undertaken. This course includes units of 20 credits and 40 credits. 20 credits is the equivalent of 200 student study hours, including lectures, seminars, assessment and independent study. 20 credits are equivalent to 10 European Credit Transfer System (ECTS) credits.

10. Staff delivering the course

Students will be taught by AECC University College academic staff and qualified professional practitioners with relevant expertise.

10. Staff delivering the course

Visiting subject specialist lecturers and workshop facilitators are brought in for all ultrasound skills-based units. Where appropriate, external teaching staff are GMC or HCPC registered and include consultant radiologists, sports exercise medicine, rheumatologists, obstetricians and gynaecologists as well as ultrasound trained chiropractors, podiatrists and physiotherapists.

11. Progression and assessment regulations

The regulations for this course are the University College's Standard Assessment Regulations which may be found from the [Latest Policies webpage](#). Please also refer to section 19 of this policy.

12. Additional costs

Additional costs are mandatory or optional costs which students will need to meet in order to fully participate in and complete their course. Students will need to budget for these costs separately as they are not included in the overall Tuition Fee they are charged. Information about additional costs applying to students on this course can be found in the document **Important information to take into account when choosing your course** available from the [Latest Policies webpage](#).

13. Methods for evaluating the quality of learning and teaching

Students have the opportunity to engage in the quality assurance and enhancement of their courses in a number of ways, which may include:

- completing student surveys annually to give feedback on individual units and on the course as a whole
- completing feedback surveys at the end of formal teaching sessions
- informal feedback through practical seminars and workshops, and in clinical placements
- seeking nomination as a Student Union representative OR engaging with these elected student representatives
- serving as a student representative on Evaluation panels for course approval/review
- taking part in course approval or professional body meetings by joining a group of students to meet with the panel
- taking part in meetings with the external examiner(s) for the course (such meetings may take place virtually where courses are part-time).

The ways in which the quality of the University College's courses are monitored and assured checked, both inside and outside the institution, are:

- annual monitoring of units and courses
- periodic Course review, at least every six years.
- External examiners, who produce an annual report
- oversight by Academic Development and Quality Committee (which includes student representation), reporting to Academic Board
- oversight by QAA institutional review (2017)
- Professional body accreditation and annual reports to these bodies (Consortium for Accreditation of Sonographic Education).

14. Inclusivity statement

AECC University College is committed to being an institution where students and staff from all backgrounds can flourish. AECC University College recognises the importance of equality of opportunity and promoting diversity, in accordance with our Dignity Diversity and Equality Policy. We are committed to a working and learning environment that is free from physical, verbal and

14. Inclusivity statement

non-verbal harassment and bullying of individuals on any grounds, and where everyone is treated with dignity and respect, within a positive and satisfying learning and working environment.

AECC University College seeks to ensure that all students admitted to our courses have the opportunity to fulfil their educational potential. The interests of students with protected characteristics will be taken into consideration and reasonable adjustments will be made provided that these do not compromise academic or professional standards as expressed through the learning outcomes.

15. Reference points including QAA Benchmark statements

There are no QAA Masters subject specific benchmark statements for ultrasound.

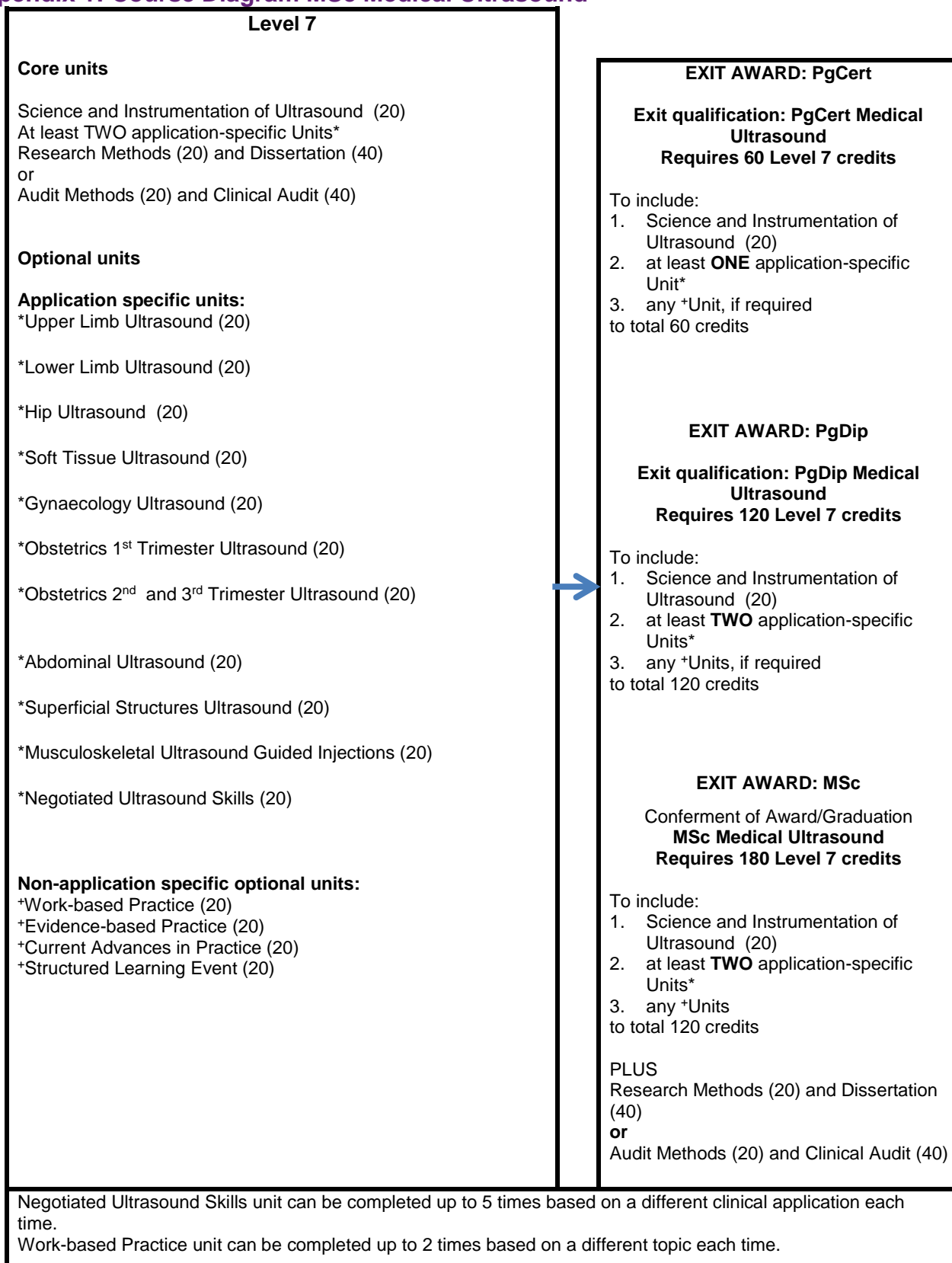
- QAA Quality Code - Part A Setting and maintaining academic standards. Accessed QAA website November 2017.
- QAA Quality Code - Part B. Accessed QAA website November 2017.
- QAA Characteristics Statement. Master's Degree. September 2015
- QAA The framework for higher education qualifications in England, Wales and Northern Ireland. August 2008
- Consortium for the Accreditation of Sonographic Education (CASE). Validation and Accreditation Handbook (revision October 2017).
- Royal College of Radiologists: Standards for providing a 24-hour diagnostic radiology service. 2009.
- Royal College of Radiologists: Ultrasound training recommendations for medical and surgical specialties. Third edition 2017.
- Society and College of Radiographers and British Medical Ultrasound Society. Guidelines for professional ultrasound practice. December 2015.
- UKAS Guidelines for Professional Working Standards. Ultrasound practice. October 2008
- Society of Radiographers. Scope of practice. 2013

16. Regulatory & policy framework

The course conforms fully with the University College's Academic Regulations and Policies for Taught Courses.

Appendix 1: Course Diagram MSc Medical Ultrasound

Entry →



Appendix 2: Learning outcomes mapping document template

This table shows where a learning outcome referenced in the course specification may be demonstrated by successful completion of a unit.

	Unit	Subject Knowledge and Understanding					Intellectual Skills					Practical Skills					Transferable Skills		
		A 1	A 2	A 3	A 4	A 5	B 1	B 2	B 3	B 4	B 5	C 1	C 2	C 3	C 4	C 5	D 1	D 2	D 3
01	Science and Instrumentation of Ultrasound	*	*				*					*	*				*	*	*
02	Upper Limb Ultrasound	*	*	*	*		*	*	*	*		*	*	*	*		*	*	*
03	Lower Limb Ultrasound	*	*	*	*		*	*	*	*		*	*	*	*		*	*	*
04	Hip Ultrasound	*	*	*	*		*	*	*	*		*	*	*	*		*	*	*
45	Soft Tissue Ultrasound	*	*	*	*		*	*	*	*		*	*	*	*		*	*	*
06	Gynaecology Ultrasound	*	*	*	*		*	*	*	*		*	*	*	*		*	*	*
08	Obstetrics 1 st Trimester Ultrasound	*	*	*	*		*	*	*	*		*	*	*	*		*	*	*
09	Obstetrics 2 nd and 3 rd Trimester Ultrasound	*	*	*	*		*	*	*	*		*	*	*	*		*	*	*
05	Abdominal Ultrasound	*	*	*	*		*	*	*	*		*	*	*	*		*	*	*
46	Superficial Structures Ultrasound	*	*	*	*		*	*	*	*		*	*	*	*		*	*	*
47	Musculoskeletal Ultrasound Guided Injections	*	*	*	*		*	*	*	*		*	*	*	*		*	*	*
10 - 14	Negotiated Ultrasound Skills	*	*	*	*		*	*	*	*		*	*	*	*		*	*	*
18,19	Work-based Practice	*	*				*	*	*					*	*	*	*	*	*
22	Current Advances in Practice		*			*	*	*	*	*					*	*	*	*	*
21	Evidence-based Practice		*			*	*	*	*	*			*		*	*	*	*	*
40	Structured Learning Event		*			*	*	*		*					*	*	*	*	*
51	Research Methods					*	*	*		*					*	*	*	*	*
52	Dissertation		*			*	*	*	*	*					*	*	*	*	*

	Unit	Subject Knowledge and Understanding					Intellectual Skills					Practical Skills					Transferable Skills		
		A 1	A 2	A 3	A 4	A 5	B 1	B 2	B 3	B 4	B 5	C 1	C 2	C 3	C 4	C 5	D 1	D 2	D 3
53	Audit Methods					*	*	*			*					*	*	*	*
54	Clinical Audit		*			*	*	*		*					*	*	*	*	

Course summary

Course title: MSc Medical Ultrasound

Unit details			Core/ Option	Pre/ co requisite units	No of credits (level in brackets)	Assessment Element Weightings (%)*					Estimated learning hours		
Number	Title	Versi on no.				Cwk 1	Cwk 2	Prac 1	Prac 2	Prac 3	scheduled contact	Directed non- contact) +	self- directed
01	Science and Instrumentation of Ultrasound	1	Core		20 (Level 7)	100		P/F			26		174
02	Upper Limb Ultrasound*	1	Option	Co: 01	20 (Level 7)	100	P/F	P/F	P/F	P/F	14	86	100
03	Lower Limb Ultrasound*	1	Option	Co: 01	20 (Level 7)	100	P/F	P/F	P/F	P/F	14	86	100
04	Hip Ultrasound*	1	Option	Co: 01	20 (Level 7)	100	P/F	P/F			14	86	100
45	Soft Tissue Ultrasound*	1	Option	Co: 01	20 (Level 7)	100	P/F	P/F			7	86	107
06	Gynaecology Ultrasound*	1	Option	Co: 01	20 (Level 7)	100	P/F	P/F			20	86	94
08	Obstetrics 1 st Trimester Ultrasound	1	Option	Co: 01	20 (Level 7)	100	P/F	P/F			14	86	100
09	Obstetrics 2 nd and 3 rd Trimester Ultrasound	1	Option	Co: 01 Co: 08	20 (Level 7)	100	P/F	P/F			14	86	100
05	Abdominal Ultrasound*	1	Option	Co: 01	20 (Level 7)	100	P/F	P/F			14	86	100
46	Superficial Structures*	1	Option	Co: 01	20 (Level 7)	100	P/F	P/F			7	86	107
47	Musculoskeletal Ultrasound Guided Injections*	1	Option	Pre: 01 and at least one of 02, 03 or 04	20 (Level 7)	100	P/F	P/F			7	86	107
10 – 14	Negotiated Ultrasound Skills 1-5*	1	Option	Co: 01	20 (Level 7)	100	P/F	P/F			7	86	107
18 – 19	Work-based Practice 1 & 2	1	Option		20 (Level 7)	100							200
21	Evidence-based Practice (shared unit from MSc Advanced Professional Practice framework)	1	Option		20 (Level 7)	100					16		184

Unit details			Core/ Option	Pre/ co requisite units	No of credits (level in brackets)	Assessment Element Weightings (%) [*]					Estimated learning hours		
Number	Title	Versi on no.				Cwk 1	Cwk 2	Prac 1	Prac 2	Prac 3	scheduled contact	Directed non- contact) ⁺	self- directed
22	Current Advances in Practice (shared unit from MSc Advanced Professional Practice framework)	1	Option		20 (Level 7)	100							200
40	Structured Learning Event (shared unit from MSc Advanced Professional Practice framework)	1	Option		20 (Level 7)	100						8-12	192
51	Research Methods (shared unit from MSc Advanced Professional Practice framework)	1	Core		20 (Level 7)	100					21		179
52	Dissertation (shared unit from MSc Advanced Professional Practice framework)	1	Core	Co:51	40 (Level 7)	100					0		400
53	Audit Methods (shared unit from MSc Advanced Professional Practice framework)	1	Core		20 (Level 7)	100					6		194
54	Clinical Audit (shared unit from MSc Advanced Professional Practice framework)	1	Core	Co:53	40 (Level 7)	100					0		400
<p>Exit qualification requirements: PgCert Medical Ultrasound Requires 60 credits at Level 7 to include successful completion of <i>Science and Instrumentation and at least ONE application-specific Unit*</i></p> <p>PgDip Medical Ultrasound Requires 120 credits at Level 7 to include successful completion of <i>Science and Instrumentation and at least TWO application-specific Units*</i></p> <p>MSc Medical Ultrasound Requires 180 credits at Level 7 to include successful completion of <i>Science and Instrumentation, at least TWO application-specific Units*, and either Research Methods and Dissertation or Audit Methods and Clinical Audit units.</i></p> <p>Exit qualification: MSc Medical Ultrasound</p>													

^{*}Directed non-contact Learning Hours includes Clinical Placement hours

***This must be consistent with information provided in each unit specification**

For classifying assessment elements please use the following categorisations: **Exam** – written exam. **Coursework** - Written assignment, including essay, Report, Dissertation, Portfolio, Project. **Practical** - Oral assessment and presentation, Practical skills assessment. The total must add up to 100%. Please add additional columns if required

Scheduled Contact hours can include any elements listed below but it must be possible to show an audit trail to demonstrate that this is a scheduled activity (for example, session should be on a student or faculty timetable): Lecture, Seminar, Tutorial, Project supervision, Demonstration, Practical classes, Supervised time in studio/workshop, Fieldwork, External visits Total must add up to 200 hours for a 20 credit unit