

PROGRAMME SPECIFICATION

KEY FACTS

Programme name	Medical Ultrasound
Award	Masters in Science (MSc)
School	Health Sciences
Department or equivalent	Midwifery and Radiography
Programme code	PSMULT
Type of study	Taught Postgraduate (Part-time)
Total UK credits	180
Total ECTS	90
Partner (partnership programmes only)	
Type of partnership	

PROGRAMME SUMMARY

The part-time, day release, medical ultrasound programme enables a flexible approach to ultrasound education, providing exit routes at Postgraduate Certificate, Postgraduate Diploma and MSc, for a range of clinical options. You can opt to begin with Postgraduate Certificate and build up credits to achieve Postgraduate Diploma or MSc in your chosen route. All routes are Consortium for the Accreditation of Sonographic Education (CASE) accredited. A clinical placement is required for entry onto the course and an average of 3 days per week clinical experience is recommended for the duration of the programme.

This postgraduate programme has been developed to provide education and training in Medical Ultrasound that will enable you to apply scientific, research, professional and technical knowledge to the clinical applications of Medical Ultrasound and if successful, achieve first post competency. This programme will provide grounding theory in this speciality which will allow you to build on the knowledge and clinical experience gained from your professional work, complementing the experiences you already have, allowing you to enhance your professional development and make a greater contribution to the healthcare process. Experienced ultrasound practitioners can develop their academic and clinical skills to advanced and consultant practitioner level, by utilising additional modules for continuing professional development.

You must undertake the compulsory modules RDM004 [Ultrasound Physics] and RCM021 [Developing Professional Skills in Ultrasound]. If you want to undertake the full MSc, a research methods module is compulsory.

You can begin with the postgraduate certificate and progress to postgraduate diploma and MSc over a 5 year registration period.

Aims

The main aims of the programme are:

- To enhance your professional practice and personal development in medical ultrasound
- To enhance critical, analytical, professional, research & communication skills and promote the ability to relate these skills to ultrasound clinical practice
- To prepare you with the skills required to develop your professional roles to advanced and consultant level in the future

- To prepare you to act autonomously in planning and implementing tasks at a professional level
- To enable you to develop originality in the application of knowledge to clinical ultrasound practice
- To promote understanding of how established techniques of research and enquiry are used to interpret knowledge in the field of medical ultrasound and develop skills to use the evidence appropriately to inform and enhance practice.

Postgraduate Certificate:

- If you are completing the Postgraduate Certificate in Medical Ultrasound you will be able to examine the theories related to at least one clinical area of practice, show evidence of synthesis and apply your knowledge to the area of clinical practice that you are studying. You will have critical insight into problems related to the area of clinical practice and be able to evaluate your practice in relation to changes at local and national level, to provide safe, high quality care. You will also use a range of techniques to undertake your scholarly work.

Postgraduate Diploma:

- If you are completing the Postgraduate Diploma in Medical Ultrasound in addition to the above you will explore knowledge related to other areas of clinical practice to broaden your expertise and skills. You will also further develop your ability to evaluate critically current evidence in relation to a range of clinical areas and provide appropriate critiques of knowledge and techniques in relation to high quality patient care and safe ultrasound practice.

MSc:

- If you are completing the MSc in Medical Ultrasound you will demonstrate original application of knowledge to your chosen area of research in medical ultrasound and consider which approaches are relevant to your practice. You will be engaged in research or scholarly activity that contributes new views to enhance the knowledge base or improve clinical practice within your chosen area of medical ultrasound.

WHAT WILL I BE EXPECTED TO ACHIEVE?

On successful completion of this programme, you will be expected to be able to:

Knowledge and understanding:

- Demonstrate a comprehensive and critical understanding of the biological, emotional, professional, clinical and scientific principles which influence the practice of medical ultrasound
- Apply relevant knowledge to a range of situations and show a critical understanding of the relationships between these
- Analyse current issues which are at the forefront of the discipline and evaluate methods which can be used to inform and improve practice

Skills:

- Critically evaluate a range of evidence, techniques and protocols relevant to ultrasound clinical practice and make informed judgements about its quality and

appropriateness. Utilise this evidence to develop evidence-based protocols and guidelines

- Recognise, analyse and solve problems relating to clinical ultrasound practice
- Synthesise coherently and effectively the knowledge and expertise related to your area of practice
- Competently perform, interpret and report the appropriate ultrasound clinical and technical procedures within the clinical environment and manage case loads
- Evaluate your role in the delivery of a quality service, critically reflect on your own learning and identify strategies to develop and improve your competency through continuing personal and professional development and lifelong learning
- Contribute to practice development, devise and implement protocols and schemes of work based on current evidence
- Demonstrate effective verbal and non-verbal communication skills and team working skills
- Effectively use a range of information technology skills
- Manage your time appropriately, meet deadlines and follow instructions

Values and attitudes:

- Demonstrate the necessary professional values appropriate for conduct within clinical ultrasound practice and make sound ethically based decisions, in the best interest of clients from a diverse range of cultural backgrounds
- Develop a critical understanding of the medico-legal, ethical and professional frameworks and their impact on clinical practice

This programme has been developed in accordance with the QAA Subject Benchmark for Master's degrees.

HOW WILL I LEARN?

The programme is designed to ensure that you learn the required information, understand the appropriate topics and can apply these to your clinical and professional practice. A blended learning approach is utilised, linking academic theory to clinical practice via work based learning, formal key note lectures, seminars, tutorials, demonstrations/workshops, e-learning, shared learning and self-directed study. Key note and on-line lectures are used to disseminate information, thus extending your knowledge in some areas and presenting new information in others. Seminars, tutorials and discussion sessions are used to reinforce a student-centred approach to learning by allowing you to prepare and present material to your peer group in person and on-line, encouraging an inter-professional interchange of ideas.

Demonstrations and workshops are undertaken as exercises that link theoretical concepts with practical sessions and allow you to gain hands-on experience.

Clinical/professional practice occurs in the workplace, where you are able to develop clinical/professional skills and apply knowledge to a wide range of clinical situations. Self-directed study and directed study via the virtual learning environment is used to encourage you to take responsibility for your own learning and to promote self-discipline and reflective skills.

For a postgraduate certificate you will need to spend approximately 600 hours studying, excluding the clinical practice within your own department. For the postgraduate diploma approximately 1200 hours study time is required, excluding the clinical practice within

your own department. For those continuing onto the MSc an additional 600 hours of self-study is recommended.

Formative feedback is provided to the cohort on-line, for some assessments or during tutorials. Individual feedback will be provided for independent learning modules. On-line quizzes are used to enable individual progress to be monitored and feedback to be obtained.

Contact hours will vary, dependent on the module options chosen. In addition to self-study and e-learning, for modules which include attendance, you will attend University for half a day to two days per week, during term time

WHAT TYPES OF ASSESSMENT AND FEEDBACK CAN I EXPECT?

Assessment and Assessment Criteria

The assessment scheme for this programme is designed to use a range of methods to assess the different skills required at an appropriate level and develop transferable skills, whilst catering for a diverse range of learning styles.

The range of assessments is intended to give a clear picture of your progress over the whole programme and to highlight areas which require remedial action or where you are progressing well. On completion of each set of assessments you are provided with written and/or verbal feedback on your progress and are encouraged to develop self-evaluation skills. The range of assessments includes objective structured examinations (OSE), written examinations, assignments, oral and/or poster presentations, on-line case discussions and clinical competency assessments. Examinations and OSEs assess your understanding of the facts and concepts and their application to practice. Poster & oral presentations are used to assess your ability to put forward logical arguments, critically evaluate issues and communicate effectively using an oral or poster method. The clinical portfolio acts as a measure of your clinical experience, shows evidence of your reflective skills and progress, whilst helping you to further develop skills required for continuing personal and professional development and life-long learning. Clinical assessments assess your clinical competence and ability to manage clinical situations as they arise, in addition to communicating in the clinical setting and writing appropriate reports.

Assessment Criteria are descriptions, based on the intended learning outcomes, of the skills, knowledge or attitudes that you need to demonstrate in order to complete an assessment successfully, providing a mechanism by which the quality of an assessment can be measured. Grade-Related Criteria are descriptions of the level of skills, knowledge or attributes that you need to demonstrate in order to achieve a certain grade or mark in an assessment, providing a mechanism by which the quality of an assessment can be measured and placed within the overall set of marks. Assessment Criteria and Grade-Related Criteria will be made available to you to support you in completing assessments. These may be provided in programme handbooks, module specifications, on the virtual learning environment or attached to a specific assessment task

Feedback on assessment

Feedback will be provided in line with our Assessment and Feedback Policy. In particular, you will normally be provided with feedback within three weeks of the submission deadline or assessment date. This would normally include a provisional grade or mark. For end of module examinations or an equivalent significant task (e.g. an end of module project),

feedback will normally be provided within four weeks. The timescale for feedback on final year projects or dissertations may be longer. The full policy can be found at:

https://www.city.ac.uk/data/assets/pdf_file/0008/68921/assessment_and_feedback_policy.pdf

Assessment Regulations

In order to pass your Programme, you should complete successfully or be exempted from the relevant modules and assessments and will therefore acquire the required number of credits.

The pass mark for each module is 50%. Each assessment component within a module has a pass mark of 50%. There is no compensation between assessments within a module or between modules

If you fail an assessment component or a module, the following will apply:

Resit: you will normally be offered one resit attempt. However, if you did not participate in the first assessment and have no extenuating circumstances, you may not be offered a resit

If you are successful in the resit, you will be awarded the credit for that module. The mark for each assessment component that is subject to a resit will be capped at the pass mark for the module. This capped mark will be used in the calculation of the final module mark together with the original marks for the components that you passed at first attempt.

If you do not meet the pass the requirements for a module and do not complete your resit by the date specified you will not progress and the Assessment Board will require that you be withdrawn from the Programme.

If you fail to meet the requirements for the Programme, the Assessment Board will consider whether you are eligible for an Exit Award as per the table below.

If you would like to know more about the way in which assessment works at City, please see the full version of the Assessment Regulations at:

http://www.city.ac.uk/data/assets/word_doc/0003/69249/s19.doc

WHAT AWARD CAN I GET?

Master's Degree:

	HE Level	Credits	Weighting (%)	Class	% required
Taught	7	120		With Distinction	70
Dissertation	7	60		With Merit	60
				Pass	50

Postgraduate Diploma:

	HE Level	Credits	Weighting (%)	Class	% required
Taught	7	120	100	With Distinction	70
				With Merit	60
				Pass	50

Postgraduate Certificate:

	HE Level	Credits	Weighting (%)	Class	% required
Taught	7	60	100	With Distinction	70
				With Merit	60
				Pass	50

WHAT WILL I STUDY?

To complete the Postgraduate Certificate you must successfully complete a total of 60 credits, including the two core modules (RDM033, Ultrasound Physics and RCM022 Developing Professional Skills in Ultrasound) and at least one clinical module.

To complete the Postgraduate Diploma you must successfully complete a total of 120 credits, including the two core modules (RDM033 Ultrasound Physics and RCM022 Developing Professional Skills in Ultrasound) and a minimum of 45 credits from clinical modules.

You must complete and pass a research methods module before undertaking the dissertation module for the award of MSc. Progression onto the MSc is dependent upon academic ability demonstrated during the Postgraduate Diploma

Most modules run on an annual basis. To follow the traditional pathways, you will need to start the course in September. If you have recognition of prior certified learning [RP(C)L] you may be able to start modules in term 2 or term 3. This will be discussed at interview.

Optional modules from within the School of Health Sciences portfolio can be undertaken, if they meet the overall learning outcomes of the programme, are available and are agreed by the ultrasound programme director.

Core modules or optional module choices will depend on the programme choice. Some of the elective modules will be core for certain routes.

The list below is not binding, as new modules become available from time to time and will be offered if they are appropriate. Similarly, some modules may become obsolete, and will be withdrawn. Some modules are only run every second year so it is important to make your module choice in advance and in close consultation with your programme director. If an elective module has less than a certain number of registered students (typically around 10) it may not run, or may only be offered every second year so please check with your programme director. You will find your core, discipline specific and some elective modules listed in the table below. You can see a full list of possible elective modules from the range of MSc programmes offered in the School of Health Sciences at www.city.ac.uk/health/courses. If you wish to take an elective module that is not listed below, please do so in consultation with your Programme Director

Module Title	SITS Code	Module Credits	Core/ Elective	Compensation Yes/No	Level
Developing Professional Skills in Ultrasound	RCM022	15	C	No	7
Ultrasound Physics	RDM033	15	C	No	7

Gynaecology Ultrasound	RDM030	15			7
Obstetric Ultrasound	RDM031	30	E	No	7
Abdominal Ultrasound	RDM032	30	E	No	7
Introduction to Research Methods and Applied Data Analysis	HRM001	30	E	No	7
Foundations in Research Methods and Data Analysis	HRM020	15	E/C	No	7
Foundations in Research Methods and Data Analysis (on-line)	HRM021	15	E/C	No	7
Introduction to Research Methods and Applied Data Analysis (online)	HRM011	30	E	No	7
Education in the Workplace	CHM002	15	E	N	7
Evidence Based Practice	RCM005	15	E	N	7
Student Negotiated Module	RCM010	15	E	N	7
Comparative Imaging	CMH003	30	E	N	7
Work Based Learning in Practice	RCM120	15	E	N	7
Work Based Learning in Practice 2	RCM122	15	E	N	7
Work based learning expert / specialist practice	RCM125	30	E	N	7
Professional Leadership	APM032	15	E	N	7

MSc: You must undertake a research methods module and the dissertation

Module Title	SITS Code	Module Credits	Core/ Elective	Compensation Yes/No	Level
Dissertation	APM002	60	E/C	No	7

You are normally required to complete all the taught modules successfully before progressing to the dissertation

TO WHAT KIND OF CAREER MIGHT I GO ON?

The programme enables you to practice ultrasound in a range of settings, such as NHS Trusts and private health care. Our graduates are employed as superintendent sonographers, clinical application specialists and lecturers, visiting lecturers, researchers

and ultrasound programme directors. A number of previous students have used their qualifications and skills abroad, working in Australia, New Zealand, South Africa, Hong Kong and the USA. Other graduates have developed the skills and confidence to present work at conferences and study days, write articles for journals, review articles for journals, undertake professional body work, external examining and present posters at the British Medical Ultrasound Society conference.

If you would like more information on the Careers support available at City, please go to: <http://www.city.ac.uk/careers/for-students-and-recent-graduates>.

WHAT STUDY ABROAD OPTIONS ARE AVAILABLE?

Regrettably we are unable to accommodate non-UK placements, due to the nature of the accreditation.

WHAT PLACEMENT OPPORTUNITIES ARE AVAILABLE?

You will need to find a placement in a clinical ultrasound department, where you can undertake a wide range of ultrasound examinations in your chosen area of practice, prior to applying for the course. The department will need to meet the requirements of the programme and provide a named clinical supervisor, who will attend training and provide support for you. Unfortunately we are unable to assist in finding a placement for you.

The NHS jobs website sometimes has student sonographers placements available www.jobs.nhs.uk.

WILL I GET ANY PROFESSIONAL RECOGNITION?

The programme is accredited by The Consortium for the Accreditation of Sonographic Education (CASE) <http://www.case-uk.org/>

Nature of Accreditation

All ultrasound programme options are CASE accredited. <http://www.case-uk.org/>

HOW DO I ENTER THE PROGRAMME?

All entrants to the Programme must be in possession of a relevant first degree.

The normal entry requirements are:

- Applicants will normally hold a BSc (hons) degree (2:1 or above) from a recognised higher education institution e.g. Radiography, Nursing, Midwifery.
- Non-standard entrants will be considered on a case by case basis, subject to availability of places on the programme. An appropriate professional qualification such as a Diploma of the College of Radiographers; Diploma in Nursing, Diploma in Midwifery may be considered; subject to successfully demonstrating the required academic level by completing a pre-course assignment and successful interview (*early application is recommended*).
- A clinical placement for an average of 3 days per week in a clinical department is required. The department will need to provide a range of clinical examinations, appropriate clinical support and a named mentor who can attend mentor and assessor training at the university. A clinical experience (CE1) form will need to be signed by the ultrasound department manager, before your application can be considered.
- If your clinical placement is terminated for any reason, the university is unable to provide placements. If a suitable clinical placement cannot be found you would be required to withdraw from the course.

For students' whose first language is not English, the following qualifications will meet the English language requirement for entry to a post graduate course of study

- A first degree from a UK university
- International English Language Testing Service (IELTS) with a minimum score of 7 (minimum of 7 in all categories).

RPL / RP(E)L / RP(C)L Requirements

In line with Senate Regulation 19, recognition of prior learning (RPL) will be considered if you have pursued appropriate studies in this or another institution or possess appropriate qualifications. RPL may be claimed for core and elective modules, subject to the following:

The limit to the volume of credit that can be permitted through RPL will be 60 credits where a student holds a Postgraduate Certificate in a Radiography related subject from another institution.

The limit to the volume of credit that can be permitted through RPL will be 120 credits where a student holds a Postgraduate Diploma in a Radiography related subject from another institution.

RPL will be permitted where the Programme Committee has assessed the claim in terms of acceptability, sufficiency, authenticity, currency and level and can demonstrate that the student's previously assessed or experiential learning meets all the learning outcomes stated in the Module Specification for the module for which they are to be awarded credit.

Version: 1.0

Version date: 2018

For use from: 2018-2019