

**Quality Assurance**

**Masters, Postgraduate Diploma, Postgraduate Certificate in Medical Science 2020-21**

**Programme Specification: Postgraduate**

Information for students: the programme specification is the definitive document summarising the structure and content of your degree programme. It is reviewed and updated every year as part of Keele’s Curriculum Annual Review and Development process. The document aims to clarify to potential and current students what you can expect from the study of the subject over the course of your programme.

<b>Names of programme(s):</b>	<b>Masters in Medical Science (MMedSci)</b>  Masters in Medical Science (Anatomical Sciences) (With exit points at PG Certificate, PG Diploma, and full Masters).  Postgraduate Certificate in Medical Science (Leadership and Management)
<b>Mode of study:</b>	Part time/full time
<b>Framework of Higher Education Qualification (FHEQ) level of final award:</b>	Level 7
<b>Duration:</b>	The full-time Master’s degree must be completed within two years of registration, and the part-time Certificate within three years.

Details of professional, statutory and regulatory body (PSRB) (If appropriate):

<http://www.keele.ac.uk/qa/professionalstatutoryregulatorybodies/>

External Examiner(s) names: <http://www.keele.ac.uk/qa/externalexaminers/>

**1. What is the philosophy of the Programme?**

Engagement with our postgraduate programme will enable participants to further develop their intellectual, personal and professional capabilities. At Keele, we call these our ten Graduate Attributes and they include independent thinking, synthesizing information, creative problem solving, communicating clearly, and appreciating the social, environmental and global implications of their studies and activities. Whilst participants will undoubtedly have already developed these skills and abilities to varying degrees, such existing capabilities can always be deepened and enriched. Our educational programme and learning environment is designed to help participants to develop further as a well-rounded postgraduate who is capable of making a positive and valued contribution in a complex and rapidly changing world, whichever spheres of life they engage in during and after their studies at Keele.

Professional training programmes provide specialist knowledge and skills for independent practice but there is widespread recognition of the need for skills in additional generic components (e.g. leadership and management and critical appraisal) to equip professionals for the challenges of modern health care. This programme seeks to provide

such knowledge and skills, within the challenge of a Masters level course and using small group learning to share knowledge and experience. The award aims to stretch candidates to achieve the higher order outcomes of synthesis between experiential and theoretical knowledge, transfer of learning into practice and impact on patient care.

The part-time Leadership route was designed to meet the needs of full-time health professionals, able to take study leave in short blocks and augmented by on line learning in the Keele Virtual Learning Environment (KLE).

Each module has a designated leader, who may be assisted by course tutors. We are proud of our multi-professional approach to teaching, using subject experts where appropriate, and of a course that successfully bridges the primary/secondary care divide for students and teachers.

**The MMedSci course aims to:**

- Develop knowledge and skills that can be applied to benefit patient care through, for example, leading quality improvement projects, provision of education, or research and evaluation activities.
- Develop a critical engagement with important professional issues in health care and research, such as healthcare ethics, various aspects of health service leadership and management, methods of research and evaluation, and medical education.
- Develop knowledge and skills that can be applied to evidence-based healthcare provision.
- Provide opportunities to improve communication skills and critical use of relevant literature
- Develop independent learning and reflection

As a result of participating fully in this programme, students will be able to (i.e. their learning outcomes):

1. Formulate questions to explore a wide variety of issues relating to patient care, service management, the effectiveness of healthcare interventions, research and education
2. Seek out and make effective use of the literature on a wide variety of topics
3. Write critical reviews, reports, and discussion documents on a wide variety of topics
4. Use their own experience and reflection as a powerful source of new learning and help others to do the same
5. Develop and enact personal learning plans
6. Communicate with, understand and work more effectively with colleagues in other health disciplines

**2. How is the Programme taught?**

The group size for modules is 10-16 students, with one or two facilitators. Most teaching is based on interactive small group methods, interspersed with practical tasks or laboratory work and supplemented by a virtual learning environment. Literature packs and handouts are provided where appropriate. IT laboratories and video recording equipment are used to support some modules. Modules may include tasks to be completed before starting the module or between blocks. Students are asked to contribute their own views and experiences, either informally during group discussions or by giving short presentations to the group.

**3. What is the Structure of the Programme?**

A rolling programme of modules, most repeated on an annual cycle, allows students to plan modules and study leave well in advance. The allocation of study time is 150 hours per 15 credit module and this usually amounts to 5 days of face to face teaching (or equivalent with on line learning) and the remainder is personal study time. The teaching is often split into smaller 1 to 3 day blocks. The structures of the named route pathways are given below.

**MASTERS IN MEDICAL SCIENCE (ANATOMICAL SCIENCES)**

<b>Certificate (60 credits in total)</b>	
<b>Non-optional core modules:</b>	
Applied Clinical Anatomy 1 (PTY-40033)	15 credits

Applied Surgical Anatomy (CLM-40105)	15 credits
Applied Morphological techniques & Imaging (CLM-40103)	30 credits



<b><i>Diploma (a further 60 credits in total)</i></b>	
<b>Non-optional core module:</b> Research Methods in Health (HLT-40001)	15 credits
<b>A choice of 3 modules from:</b>	
Neuroanatomy (CLM-40130)	15 credits
Assistive technologies in neuromuscular rehabilitation (PTY-40035)	15 credits
Cell & Tissue Engineering (MTE-40033)	15 credits
Concepts of Neurological Rehabilitation (PTY-40025)	15 credits
Dynamic Ultrasound Imaging (PTY-40034)	15 credits
Medical Education (CLM-40002)	15 credits
Physiology and Pharmacology of Pain (PTY-40010)	15 credits
Physiology of Neuromusculoskeletal Tissue (PTY-40005)	15 credits
Statistics and Epidemiology (CLM-40003)	15 credits
Stem Cells: types, characteristics and applications (MTE-40028)	15 credits



<b><i>Masters (a further 60 credits in total)</i></b>	
Dissertation (CLM-40083)	60 credits



Once all 180 credits achieved the MMedSci (Anatomical Sciences) Intercolated is awarded	180 credits MMedSci [Anatomical Sciences]
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**MASTERS IN MEDICAL SCIENCE (LEADERSHIP AND MANAGEMENT)**

<b><i>Certificate (60 credits in total)</i></b>	
<b>Non-optional core modules:</b>	
Independent Practice Based Study (CLM-40085)	30 credits
Leadership & Management for Healthcare Professionals (CLM-40104)	15 credits
Managing Change & Quality Improvement (CLM-40086)	15 credits

<b>Learning Outcomes</b> As a result of participating in this programme, students will be able to:	<b>Module in which this is delivered</b>	<b>Principal forms of assessment (of the Level Outcome) used</b>
1,2,3,4,6	Applied Clinical Anatomy 1 (PTY-40033)	Practical Assessment
1,2,3,4,6	Applied Morphological Techniques and Imaging (CLM-40103)	lab report; critical appraisal; oral presentation
1,4,6	Applied Surgical Anatomy (CLM-40105)	OSCE Presentation with written report
1,2,3,4,6	Assistive Technologies in Neuromuscular Rehabilitation (PTY-40035)	Either essay or a presentation
1,2,3,4,6	Cell & Tissue Engineering (MTE-40033)	written assignment based on laboratory course work and an end of module essay-based examination
1,2,3,4,6	Concepts of Neurological Rehabilitation (PTY-40025)	written assignment
1,2,3,6	Dynamic Ultrasound Imaging (PTY-40034)	Case Study, Practical Exam
1,2,3,4,5,6	Independent Practice Based Study (CLM-40085)	Portfolio
1,2,3,6	Leadership & Management for Healthcare Professionals (CLM-40104)	One written assignment-plus a 10-minute presentation
1,2,3,4	Managing Change and Quality Improvement (CLM-40086)	Group review on the KLE; Case Study; Group Project; essay
2,3,4,5,6	Medical Education (CLM-40002) *	A reflective log with a minimum of 6 entries. Reflective essay
2,3	Molecular Techniques: Applications in Tissue Engineering (MTE-40025)	Essay, written examination
1, 2, 3, 4, 5	Neuroanatomy (CLM-40130)	Practical exam and presentation
1,2,3,4,6	Physiology and Pharmacology of Pain (PTY-40010)	Essay
1,2,3,4,6	Physiology of Neuromusculoskeletal Tissue (PTY-40005)	Reflective assignment integrating theory into practice
1,2,3	Research Methods in Health (HLT-40001)†	Online tasks (MCQs and short questions); Essay
1,2,3	Statistics and Epidemiology (CLM-40003)	Two written assignments
1,2,3,4,6	Stem Cells: types, characteristics and applications (MTE-40028)	Written assignment based on laboratory course work and an end of module essay-based examination

\* This module can form an entry pathway to the Postgraduate Certificate in Medical Education

### **Exit Awards**

Students can be awarded the following qualifications within the programme:

- Postgraduate Certificate in Medical Science (Anatomical Science)– total of 60 credits from core taught modules
- Postgraduate Certificate in Medical Science (Leadership and Management)– total of 60 credits from core taught modules
- Postgraduate Diploma in Medical Science (Anatomical Science) – total of 120 credits from taught modules
- Masters in Medical Science (Anatomical Science)– 120 credits from taught modules (must include Research Methods) plus a dissertation for a further 60 credits

In addition, recognition is given for credits gained on other modules offered as Masters programmes within the Faculty of Medicine and Health Sciences. Providing the content is appropriate to the learner's educational needs, modules from such programmes can contribute a maximum of 45 credits to a MMedSci or 15 to a PG Diploma in Medical Science

#### **4. How is the Programme assessed?**

A variety of assessment methods is used, including essays, task-based assignments, group presentations, assessment of communication skills and a portfolio.

Each method of assessment is supported by clear criteria for marking. The pass mark is 50% for all elements of assessment.

This range of assessments allows students to demonstrate the achievement of the different outcomes by:

1. Class tests to demonstrate knowledge and problem-solving abilities
2. Presentations to develop communication, teaching, scientific and leadership skills
3. Group work and tasks and to develop practical skills
4. Essays to develop critical thinking, problem solving and skills of marshalling and defending an argument
5. Portfolio to demonstrate skills of reflective practice

Formative assessment occurs in several places in the award including:

1. Class presentations to rehearse arguments and gather feedback from tutors and fellow students
2. Self-assessments are used in the VLE to guide self-directed learning
3. Video feedback on performance

#### **5. What are the typical admission requirements for the programme?**

This programme is intended for doctors, other health professionals or students intercalating within a medical course.

Information on this course is provided within the Postgraduate Study Guide:

<http://www.keele.ac.uk/pgtcourses/course/details/medicalscience/>

Student admissions are administered by the University's Admissions Office. Information on how to apply can be found at: <http://www.keele.ac.uk/pgapply/>

#### **6. How are students supported on the programme?**

- The Course Handbook provides key information and guidance on structure, content and assessment, including dates for submission of assignments. The current year's handbook also includes the module dates. The course complies with University policy on student pastoral and academic support.
- The Course Administrator is based at the Keele Hall and is available to deal with students' queries by phone, email or in person.

#### **Academic Development Tutor**

Aim:

- To offer an individual resource for students that are undergoing academic or personal issues that may detrimentally affect the student's academic output.
- To check the student's general academic and social progress.

Structure:

- Student and Mentor to meet/ make contact a minimum of twice a year (N.B. This meeting frequency may be increased should special needs deem this necessary).
- Meeting to be set up by student/mentor with course administrator being kept informed of meeting occurrence.
- What was discussed at each meeting should be briefly documented on the electronic student file and kept confidentially by the course administrator, tutor and the student.

**7. Learning Resources**

The programme is run mostly in the Medical School buildings in the Clinic Education Centre, at Royal Stoke University Hospital or in Primary Care Sciences on Keele Campus or in Keele University laboratories. Seminar and lecture rooms, Computer skills labs and occasional visits off campus are used. Clinic based or bed side teaching is rare but is likely to form the location for the portfolio learning of the reflective module. Several modules contain a significant component of online learning.

**8. Quality management and enhancement**

The course director assumes overall management responsibility for the programme and is accountable to the Director of Postgraduate Programmes and the School of Medicine Postgraduate Education Committee, with student representation.

In addition to:

- Student feedback
- Module evaluation questionnaires
- Regular module leaders' meetings
- Meetings between the programme leads of the cognate courses
- Annual Examinations Board
- Annual External Examiner Reports
- Annual Programme Review report to the University
- School of Medicine staff development programme

**9. The principles of programme design**

This is to provide a solid foundation of core, medical science knowledge. This fosters a wider perspective to critical, analytical thinking to enable better use of evidence-based information and its application to the students chosen clinical field.

**10. Programme Version History**

Version History	Date	CHANGES / NOTES
Date first created (if known)		
Date last reviewed / revised	May 2019	Pathways withdrawn
Date last approved at SLTC	25.4.17	<ol style="list-style-type: none"> <li>1. Removal of O&amp;G route, PC route</li> <li>2. Suspension of surgery route</li> <li>3. amendment to Oncology route modules, Paediatric Respiratory Medicine</li> </ol>

		<p>route modules</p> <p>4. Removal of assessment weighting from module table</p> <p>5. Removal of out of date options:</p> <p>Advanced training skills (Obstetrics and Gynaecology) (CLM-40097)</p> <p>Basic Skills in Surgical Practice (CLM-40077)</p> <p>Core Skills in the Care of Critically Ill Surgical Patients (CLM-40078)</p> <p>Health Informatics (CLM-40061)</p> <p>Hospital Paediatrics Online I (CLM-40081)</p> <p>Hospital Paediatrics Online II (CLM-40082)</p> <p>Laparoscopic Skills in Surgical Practice (CLM-40106)</p> <p>Practical Clinical Paediatrics (CLM-40079)</p> <p>Practical surgical skills (Obstetrics and Gynaecology) (CLM-40098)</p> <p>Primary Care Paediatrics (CLM-40080)</p> <p>CLM-40012</p>
Date last approved at SLTC	18.4.19	<p>Suspend:</p> <p>MMedSci (the generic route) – PG Cert, PG Dip, Masters</p> <p>MMedSci (Stroke) - PG Cert, PG Dip, Masters</p> <p>MMedSci (Frailty and Integrated Care) - PG Cert, PG Dip, Masters</p> <p>MMedSci (Paediatric Respiratory Medicine) - PG Cert, PG Dip, Masters</p> <p>MMedSci (Leadership and Management) - DP Dip and Masters (i.e. not PG Cert)</p>
Date last approved at FLTC	May 2019	

**COURSE REGULATIONS for MASTER'S IN MEDICAL SCIENCE**

**2020**

*These regulations supplement the relevant University Academic Regulations which are to be found on the University Website and the University Calendar. In the event of a contradiction or other discrepancy between these regulations and the University Academic Regulations, the University Academic Regulations shall be authoritative, unless approval has been given by Senate for a variation from the University Academic Regulations. Any such variations are listed in Section 12 of these Course Regulations.*

**1. Courses to which these regulations apply**

These course regulations apply to the **Certificate, Diploma and Master's in Medical Science** and awards are made under University Regulation C.7 (previously 2A) (Taught Postgraduate Degrees).

**2. Fitness to Practice**

Students registered on the Award, Certificate, Diploma or Masters in Medical Science are subject to the University Regulation B.5 (previously [University Regulation 18](#)) on Fitness to Practice.

**3. Course structure**

The MMedSci Master's programme involves the student undertaking modules to accumulate 120 credits, including core modules as stipulated in the programme specification. A 60-credit dissertation then makes the total required to obtain a Master's degree i.e. 180 credits. Should the student fail to pass one or more optional modules, other modules can with approval be undertaken to contribute to the final number of credits, to a maximum of 150 credits in total.

In the case of a named route it is essential that the core modules are passed. In the event of any route core modules not being passed the student can progress without further study, as long they fulfil the compensation criteria in Regulation C.7 (previously 2a) and will be awarded a generic PG Cert, PG Dip, or Master's degree, subject to the correct number of passed module assignments.

In the event of any route core modules not being passed, and they do not fulfil the compensation criteria, a student can progress with further study and will be required to undertake the generic programme core modules as defined in the programme specification and will be awarded a generic PG Cert, PG Dip, or Master's degree, subject to the correct number of passed module assignments.

The modules offered are subject to development and change over time, subject to approval by the Faculty of Medicine and Health Sciences Education Committee. It may not be possible to offer all optional modules every year, subject to student demand. Further details of modules available can be found in the Programme Specification.

All students may apply for any optional modules that are listed in the specification document for the relevant programme. It may also be possible to study other modules that sit within the Faculty of Medicine and Health Sciences at the discretion of the MMedSci Course Director.

Students will choose their modules after discussion with the course tutor and depending on such factors as a learning needs assessment or professional requirements. The maximum a student can attend is 150 credits of modules. The maximum time allowed to complete the full-time Masters course in Anatomical



Sciences is 1 year from registration date. The maximum time allowed to complete the part-time PG Certificate in Leadership and Management is 3 years from registration date.

It is expected that the dissertation will be in this subject area.

#### **4. Modules required for the purposes of professional exemption**

N/A

#### **5. Course-specific entrance requirements**

The requirement for admission to certain individual modules is that the entrant be a practising health professional and graduate of a health-related degree programme, or equivalent.

#### **6. Requirements for admission with advanced standing**

Recognition of prior certificated learning (RPL) will be permitted according to the procedure outline here:

<https://www.keele.ac.uk/ga/programmesandmodules/accreditationofpriorlearning/>

Whilst RPL is normally granted against a specific module in the Keele framework, if no such module exists within the framework RPL may still be permitted if the module or portfolio submitted meets level-7 learning objectives and the philosophy of the programme on which the student is registered.

#### **7. Specific requirements for approving module exemptions**

Within the Faculty of Medicine and Health Sciences, no more than 50% of the credits with which a student wishes to gain an award can normally be contributed through RPL (i.e. 30 for PGCert, 60 for PGDip). However, where the course regulations specify that APCL/APEL is only permissible against option modules, and the number of credits available for option modules within an award is lower than the above maxima, this lower number of credits constitutes the extent of RPL permissible.

RPL are not possible within the MMedSci dissertation stage.

Exceptionally, with the approval of the Course Director and the External Examiner, a student who had previously completed a PGDip equivalent to the Keele PGDip may be permitted direct entry to the MMedSci dissertation stage.

If, prior to registering on a programme, a student has taken one or more Keele modules that are specified modules on the programme on which they are registering, accreditation of these modules will not normally count towards the maximum permissible RPL.

No more than 25% of the credits with which a student wishes to gain an award can be contributed through accreditation of modules undertaken at other HEIs during registration on the Keele framework. Credits that have formed part of a previous award outside the MMedSci programme (either through RPL or through the modules offered within that award) cannot normally be used again in respect of an award in this framework.

*Applications for recognition of prior learning should be made according to the procedures outlined here:*

<https://www.keele.ac.uk/ga/programmesandmodules/accreditationofpriorlearning>

#### **8. Attendance requirements**

Taught modules consist of several elements, all of which are necessary to satisfy the University that appropriate teaching and learning has taken place. Students unable to attend all of the taught components

(e.g. through illness) may be permitted to submit the assignment and gain credits, at the discretion of the module leader, but only if they have attended at least 75% of the face-to-face taught sessions.

Students whose attendance is deemed unsatisfactory by module leaders or tutors – in the absence of any approved exceptional circumstances - may be asked to withdraw from the module, and will forfeit the modular fee. Such students will not be permitted to submit an assignment or to gain any credits for the module.

**In the case of funding by external bodies (e.g. hospital trusts or deaneries) or where attendance at the modular course is part of contractual study leave, poor attendance will be notified to the appropriate body.**

## **9. Regulations governing fieldwork and/or placement**

Students are expected to conduct themselves in an appropriate professional manner during all placement activities and are bound by the rules of confidentiality and consent operated by the host institution.

Any investigations, projects, interviews, etc conducted as part of a student placement is subject to approval and regulation by the Departmental Student Projects Ethics Committee.

## **10. Regulations in respect of modules with more than one form of assessment**

Where modules contain more than one form of assessment, their marks will be aggregated to obtain the overall module mark, with weightings as specified in the module guide in that year's Course Handbook. All assignments need to be passed, if one assessed component of a module fails, the module mark will be capped at 50% on successful resubmission.

Work must be typed or word processed. The electronic submission may be subjected to the university plagiarism detection software, Turnitin.

All assessed work must contain a Front Sheet that includes a statement that this is the candidates own work.

A statement of the University's policy on plagiarism and other academic dishonesty can be found in Section 12 of Regulation D.1 (previously regulation 8) in the General Regulations for University Examinations and Assessments.

Work must be submitted on the date and by the time specified for the assignment to via the relevant section on the KLE, unless otherwise specified.

Assignments submitted on time will normally be returned to the student within four working weeks of submission. Marks indicated at this time are provisional and subject to change until ratified at the appropriate examination board.

If an extension is required please follow the exceptional circumstances process <http://www.keele.ac.uk/ec/>. Students should submit their claim as soon as they become aware of the problem and prior to the examination and/or coursework deadline, unless the very nature of the reasons for the extension wholly precluded a request any earlier.

Please note the application needs to be submitted online via e-vision, via 'The Office' tab in the KLE, paper forms will not be accepted by the School. There is also guidance in e-vision on how to complete the on-line form.

The School's exceptional circumstances panel will make a decision, based upon submitted evidence, and notify the student in writing of the outcome. Whilst the panel will take all reasonable evidence into consideration, further evidence may be requested.

This information is made available to the External Examiner at Examination Boards. Extensions will be considered on an individual basis.

Students who have not requested an extension but wish to present 'exceptional circumstances' to the Examination Board should follow the same procedure as above.

Students are strongly advised to speak to their Academic Development Tutor, Course Director or the Director of Postgraduate Studies before doing so. Extensions via 'exceptional circumstances' are not guaranteed.

### **Late Submission of Coursework**

Detailed information relating to late submission of coursework is found within the "Postgraduate Medicine Assessment Practices" document on the Masters in Medical Science (all routes) KLE page.

#### **12. Any instances where Senate has approved a deviation from any University Academic Regulation**

A student may be permitted to re-submit a modified version of his/her original work, at the discretion of the relevant Programme Manager and/or Course Committee, who may consult with the external examiner. The maximum mark achievable in relation to reassessment will be 50%, see Regulation C.5 (previously University Regulation 2A.)

#### **13. Any other regulatory matters specific to the course not covered by the University regulations**

Application for re-admission to a programme/module following immediately or closely on a requirement to withdraw will normally be considered only in the most exceptional cases, because:

- (i) confidence that the applicant has good prospects of successfully completing the programme/module would normally be absent if the applicant had been required to withdraw from the programme/module in the recent past; and
- (ii) the purpose of the various provisions in University Regulations to deal with academic failure of modules (e.g. concerning exceptional circumstances, and reasonable opportunities for re-assessment, repeating option modules and periods of study) and opportunities for the impartial hearing of appeal, and where necessary leave of absence, is to ensure that a student has every opportunity, consistent with the maintenance of academic standards, for success within the programme/module.