



Programme Specification (PG)

Awarding body / institution:	Queen Mary University of London
Teaching institution:	Queen Mary University of London
Name of final award and programme title:	MSc Tactical, Military, Austere and Operational Medicine PgD Tactical, Military, Austere and Operational Medicine
Name of interim award(s):	
Duration of study / period of registration:	MSc (3 Calendar Years), PGDip (2 Academic Years) - via DL
Queen Mary programme code(s):	PMSP-DLICMS6, PDPP-DLICMS3
QAA Benchmark Group:	
FHEQ Level of Award:	Level 7
Programme accredited by:	NA
Date Programme Specification approved:	24 Mar 2021
Responsible School / Institute:	Blizard Institute

Schools / Institutes which will also be involved in teaching part of the programme:

Collaborative institution(s) / organisation(s) involved in delivering the programme:

Barts Health NHS Trust

Programme outline

The MSc Tactical, Military, Austere and Operational Medicine (TMAOM) is a three year 180 credit programme designed to offer advanced training in resuscitation medicine with a focus on military, combat, domestic terrorism/security and austere environments. Students are expected to be drawn from medical, paramedical, physician assistant and nursing backgrounds who are working in military, police, rescue and/or hazardous environmental roles. It is delivered by distance learning and is not campus based.

The first two years of the course consist of eight taught modules. Each of these modules is 15 credits and consists of 25-30 one hour pre-recorded lectures delivered online. For each of these the students will be tasked with exercises and further reading to be reviewed at the weekly online tutorial of approximately one hour. Successful completion of the first two years leads to the PGDip award.

In year 3 students will take the 60 credit Scientific Paper module for the MSc award.

Aims of the programme

This MSc aims to assist doctors, paramedics, physician assistants and nursing staff to develop the knowledge and skills required

to be highly skilled practitioners in delivering acute critical care to patients as they arrive in the resuscitation area of an emergency department, in the pre-hospital environment, in limited resource settings and in hostile environments. This MSc offers dedicated training in emergency and resuscitation medicine to provide the graduate with a skill base that reaches beyond general training in emergency medicine/paramedic science/critical and emergency care nursing, so marking the graduate as having a sub-specialty interest and skill set. It teaches how to adopt this skill set to hostile environments. It is designed to teach the students to appraise and examine the evidence for critical care interventions based on published evidence and from their own clinical work. By learning the pathophysiology and how this is altered by treatment students will gain a detailed understanding and so be able to synthesise the best care in complex patients. By involving experts from a range of military and paramilitary organisations we will teach the student how to develop and transfer these skills into a range of physically/emotionally/geographically challenging arenas. We will teach the students how to search and appraise literature, and how to present their synthesis in written and verbal formats.

What will you be expected to achieve?

On completing this MSc the student will have gained an in depth understanding of emergency and resuscitation medicine with the focus on patients cared for in emergency and prehospital environments. The student will have also gained an in depth understanding of the challenges posed by a wide range of hostile arenas, such as under fire, in geographically hostile environments and locations with resource limitation. Students will be able to adapt their assessment and care in light of the disease process and assessment location.

Programme graduates are expected to apply the theoretical knowledge gained to:

- Take a subspecialty interest in resuscitation medicine or working in hostile environments
- Offer a high standard of care and take a leadership role in resuscitation
- Be able to adapt their clinical care to a range of hostile working environments while maintaining personal and patient safety
- Identify risks and challenges posed in a range of hostile working environments.
- Identify shock syndromes, apply appropriate diagnostic tools and interpret the results
- Identify and appraise scientific literature, then formulate guidelines and teaching for their departments and areas of practice
- Develop team working and offer oral and written presentations

Academic Content:

A 1	Identify, critically evaluate and appraise original research. Basic trial design and statistics.
A 2	Identify, classify, treat and understand the pathophysiology of shock syndromes.
A 3	Understand of oxygen delivery, advanced airway care, respiratory support, procedural sedation/analgesia and the treatment of cardiorespiratory arrest in adults and children.
A 4	Understand the pathophysiology of common emergency presentations, focussing on those at risk of deterioration .
A 5	The assessment and initial resuscitation of major trauma
A 6	Assessment and care delivery under fire and in hostile locations
A 7	Core knowledge of acute toxicology, CBRN events and environmental hazards.
A 8	Knowledge of prehospital care and mass casualty incidents

Disciplinary Skills - able to:

B 1	Undertake research methodology as applied to patients and critically appraise papers
B 2	Demonstrate a detailed understanding of the causes and consequences of shock/organ failure, evaluation of treatment by understanding the risk and benefit of the tools of resuscitation.
B 3	Demonstrate a detailed understanding of the management of cardiac arrest, airway care and sedation so allowing a detailed synthesis of the causes and treatments available.
B 4	Demonstrate ability to evaluate the major pathologies that underpin organ failure and shock, and the developments in linked specialties enabling a comprehension of the care provided in the emergency department and hospital.
B 5	Demonstrate a detailed understanding of trauma teams, haemostatic resuscitation and trauma assessment so enabling higher levels of care and team leadership.
B 6	Comprehend the challenges and limitations of care delivery on the battle field or terrorist arenas, understand required changes in care delivery in order to maintain personal and patient safety
B 7	Comprehend, identify and treat illness resulting from intoxication and infection, assess and treat irradiated patients and deliver care in a range of environmentally hazardous environments.
B 8	Ability to apply the skills developed in the previous modules into the prehospital and mass casualty environments.
B 9	Perform a detailed literature search and synthesise available evidence

Attributes:	
C 1	Students will learn to critically apply learning from scientific papers to their practice and how use these to develop guidelines to improve care in their departments. Through understanding trial design and ethics they will understand how to participate in research.
C 2	Translation of (patho)physiology and resuscitation tools into clinical practice.
C 3	Synthesise the underlying causes and treatment options available to manage cardiac arrest and respiratory failure in clinical practice
C 4	Understanding of the disease processes that lead to shock and organ failure so enabling a higher level of care delivery and communication.
C 5	An understanding of trauma shock, trauma resuscitation and the roles of practitioners involved in trauma care enables students to develop skills in trauma team leadership.
C 6	Evaluate the civilian and military fighting environment, then adapting assessment and care learnt to date into these arenas based on risk and injury complex.
C 7	To evaluate clinical presentations identifying the toxidromes/clinical syndromes that guide treatment and identify antidotes, to and critically assess risks to patients and staff. Evaluate hazardous environments, assessing risks and adapting care delivery as required.
C 8	Understand and evaluate the differing priorities of care in the hospital and prehospital environments.
C 9	Develop skills in written communication and discussion, synthesise data to improve patient care.

How will you learn?

All modules are based on an online learning platform (QMPlus). Lectures are recorded by experts in their field and are scheduled at a rate of 3-5 per week. Students view these in their own time and are expected to watch all lectures and read assigned material. Online case-based exercises will be posted to the student forum which will facilitate group discussion and learning. Students will communicate via QMPlus forums, email, tutorials and other methods of their choosing.

Students will be expected to attend the weekly online tutorials to discuss the topics studied. They will be assigned tasks to

discuss in small groups and feedback to the main group. Polls will be posted to enable students to assess their understanding.

Students will take 4 x 15 credit compulsory modules each year, for the first two years. Each taught module runs for 8 consecutive weeks with a two week break at Christmas. Those students wishing to complete the MSc award will take a third and final year to complete the 60 credit research module.

Each taught module represents 150 hours of notional study – this includes self-directed reading, lectures, tutorials, assessments and assignments. Each module will consist of around 25-30 lectures, with each lecture approximately 60 minutes in length and an accompanying group tutorial also approximately 60 minutes in length. Thus contact teaching is approximately 40 hours with self-directed study/assignments of around 110 hours per module equating to around 14 hours each week. The MSc therefore requires a time commitment of around 600 hours annually for three years.

The scientific paper module is 60 credits. The title will be proposed by the student at the start of their third academic year. All proposed titles must be agreed by the Year 3 Lead and students will be assigned a supervisor to advise on their work.

How will you be assessed?

Modules will be assessed in a variety of ways to test learning outcomes, including MCQ exams, presentations and written assignments.

Students must listen to all lectures and attend online tutorials (or listen to the recorded tutorial). Failure to meet the Institute's requirements for attendance and/or submission of assessment may result in termination from a module or from the programme itself.

All students are also expected to contribute to the tutorials. This consists answering questions about cases, interpreting displayed images, contributing to poll questions and working in breakout groups to solve problems.

Scientific Paper

Students wishing to complete with an MSc will also need to undertake and pass a 60 credit year 3 which will include assessments such as a project plan, presentation and scientific paper. The topic should be in an area of resuscitation medicine chosen by the student and approved by the course lead. Students will put into practice and develop on the skills they have learned over the preceding two years, such as literature searches, critical appraisal, guideline development, presentation skills and scientific writing. A dedicated lecture and tutorial programme should be attended.

How is the programme structured?

Please specify the structure of the programme diets for all variants of the programme (e.g. full-time, part-time - if applicable). The description should be sufficiently detailed to fully define the structure of the diet.

The programme will be offered part time over 3 calendar years, with credit value distributed equally over this time frame. Students will be required to meet the standard progression hurdle from year two to year three, passing sufficient credits to progress to the dissertation in the final year.

Year 1 Modules (60 credits)

Year one starts with an academic module to equip students with basic academic skills to use in their MSc and medical practice. Literature searching and study design and basic statistics are covered. The next 3 modules explore the basic science of resuscitation medicine with modules on cardiovascular failure, airway care & sedation and high risk emergency medical diagnoses.

- Fundamentals of Research - ICM7067 (Compulsory, 15 Credits)
- The physiology of shock, shock syndromes and tools of resuscitation - ICM7068 - (Compulsory, 15 Credits)
- Cardiac arrest, airway management, oxygenation, analgesia and procedural sedation - ICM7069 - (Compulsory, 15 Credits)
- Emergency Care - ICM7077 - (Compulsory, 15 Credits)

Year 2 Modules (60 Credits)

Year 2 explores trauma care, imaging in acute illness, toxicology and prehospital care as applied to resuscitation medicine. The last module then looks at the transfer to intensive care Medicine, picking up and developing the discussion of homeostasis and organ support in more detail.

- The Emergency Management of Severe Trauma - ICM7047 - (Compulsory, 15 Credits)
- Tactical Medical Care - ICM7240 - (Compulsory, 15 Credits)

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- Hazardous material and environmental medicine - ICM7241 - (Compulsory, 15 Credits)
 - Pre-hospital care and mass casualties - ICM7049 - (Compulsory, 15 Credits)

There will be no further teaching for PGDip students.

Students undertaking the MSc will need to complete and pass a further year of study as outlined below:

- Independent Scientific Paper - ICM7074 - (60 Credits, Core for MSc award)

Academic Year of Study PT - Year 1

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Fundamentals of Research	ICM7067	15	7	Compulsory	1	Semester 1
The Physiology of Shock, Shock Syndromes and tools of resuscitation	ICM7068	15	7	Compulsory	1	Semester 1
Cardiac arrest, Airway management, Oxygenation, analgesia and Procedural Sedation	ICM7069	15	7	Compulsory	1	Semester 2
Emergency Care	ICM7077	15	7	Compulsory	1	Semester 3

Academic Year of Study PT - Year 2

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
The Emergency Management of Severe Trauma	ICM7047	15	7	Compulsory	2	Semester 1
Tactical Medical Care	ICM7240	15	7	Compulsory	2	Semester 1
Hazardous material and environmental medicine	ICM7241	15	7	Compulsory	2	Semester 2
Prehospital care and mass casualties	ICM7049	15	7	Compulsory	2	Semester 3

Academic Year of Study PT - Year 3

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
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Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Independent Scientific paper	ICM7074	60	7	Core	3	Semesters 1-3

What are the entry requirements?

For doctors:

- A medical degree
- One or more years' basic training in emergency medicine/anaesthesia/general medicine/cardiology/acute surgery/intensive care medicine/pre-hospital care. Intern/house officer/FY1 pre-registration experience is not counted as basic training.

For Nurses:

- A nursing degree at 2:2 or higher. Applicants with academic study slightly below this level will be considered on an individual basis if there is very strong evidence of suitable clinical experience in a relevant medical field. For example, Nursing professionals with non-honours degrees or diploma/foundation degrees but who come with extensive clinical experience.
- Three years' experience in emergency/critical care nursing.

For paramedics:

- A paramedic science degree at 2:2 or higher. Applicants with academic study slightly below this level will be considered on an individual basis if there is very strong evidence of suitable clinical experience in a relevant medical field. For example, Paramedics with non-honours degrees or diploma/foundation degrees but who come with extensive clinical experience.
- Three years' experience working as a paramedic OR one year's experience plus at least 12 months working as a critical care paramedic or in a dedicated HEMS system.

For Physician assistants & associates:

- A physician's assistant/associate degree at 2:2 or higher. Applicants with academic study slightly below this level will be considered on an individual basis if there is very strong evidence of suitable clinical experience and post graduate study in a relevant medical field, such as emergency medicine/anaesthesia/general medicine/cardiology/acute surgery/intensive care medicine/prehospital care.
- Three years' experience with at least two years in emergency medicine/anaesthesia/general medicine/cardiology/acute surgery/intensive care medicine/prehospital care. Up to two years from previous paramedic/nursing experience could be included.

For all applicants:

- Current employment in emergency medicine, critical care, acute medicine, observation medicine, pre-hospital care or as a paramedic. Part time work of at least two days per week is accepted.
- A letter of support from the departmental lead or educational lead confirming that the applicant will have the support of their department.
- English language skills as per the Postgraduate Admissions guidelines; for example IELTS language test scores of academic standard 6.5 (including 6 in Writing) or QM recognised equivalent.

How will the quality of the programme be managed and enhanced? How do we listen to and act on your feedback?

The Staff-Student Liaison Committee provides a formal means of communication and discussion between schools/institutes and its students. The committee consists of student representatives from each programme in the school/institute together with appropriate representation from staff within the school/institute. It is designed to respond to the needs of students, as well as act as a forum for discussing programme and module developments where appropriate. Staff-Student Liaison Committees meet regularly throughout the year. Students studying the MSc programme would be asked to nominate representative(s), who would be invited to attend these SSLC meetings. However as distance learning students, they would not be expected to attend in person, rather they would be asked to submit a written report gathered from their colleagues which would be formally reviewed by the SSLC. The programme leads are requested to provide comment/feedback on any issues raised by the student representatives.

The institute operates an Education Committee, which will advise the programme director and Education Lead on all matters relating to the delivery of taught programmes at school level including monitoring the application of relevant QM policies and reviewing all proposals for module and programme approval and amendment before submission to Taught Programmes Board. Student views are incorporated in the committee's work in a number of ways, such as through student membership, or consideration of student surveys.

What academic support is available?

Students on this programme will be studying via distance learning, and will engage with each other and programme tutors via a combination of online discussion forums, one to one email support, and live tutorial sessions. Students will be encouraged to support each other in their research and discussion, and will also have email access to specialist module tutors who can address specific queries or concerns.

Each student will be invited to view the recorded institute PGT induction programme, which will include sessions on academic writing, plagiarism, referencing and pastoral support.

Each student will be provided with a dedicated personal tutor, who will remain with them for the duration of their studies. This tutor will support the student on an academic and pastoral level as required, referring issues to the programme director and academic administrator when appropriate.

Students undertaking year three will be allocated a dedicated supervisor at the start of the year, depending on the subject chosen.

Programme-specific rules and facts

Students must achieve sufficient credits/module marks to progress from the taught element to year 3.

How inclusive is the programme for all students, including those with disabilities?

The Blizzard institute are committed to supporting disabled students of all backgrounds, and have close links with QM DDS and student support services. Academic advisors and course tutors are encouraged to closely monitor the experience of disabled students, and provide all necessary support and referrals as needed.

The programme will aim to identify and assist any undiagnosed students who may be suffering from SpLD within the first semester. All efforts will be made to support these students in collaboration with the services offered by QM.

All students (including DL students) are given the opportunity for a disability and dyslexia assessment, and the programme will work to implement all recommendations made by QM for diagnosed students.

The learning material is created to ensure it meets the QM standard for accessibility and is available across all platforms.

Links with employers, placement opportunities and transferable skills

Programme Specification Approval

Person completing Programme Specification:

Prof Tim Harris

Person responsible for management of programme:

Prof Tim Harris, A/Prof Paul Rees

Date Programme Specification produced / amended by School / Institute Learning and Teaching Committee:

20/4/22 (for Sep 22)

Date Programme Specification approved by Taught Programmes Board:

24 Mar 2021