

Programme Title: MSc Emergency and Resuscitation Medicine



Programme Specification

Awarding Body/Institution	Queen Mary University of London
Teaching Institution	Queen Mary University of London
Name of Final Award and Programme Title	MSc/PGDip Emergency and Resuscitation Medicine
Name of Interim Award(s)	Postgraduate Certificate (PGCert)
Duration of Study / Period of Registration	MSc (3 Academic Years), PGDip (2 Academic Years) - via Distance Learning
QM Programme Code / UCAS Code(s)	A3Z3 MSc /A3Z2 PGDip
QAA Benchmark Group	
FHEQ Level of Award	Level 7
Programme Accredited by	NA
Date Programme Specification Approved	01 Mar 2017
Responsible School / Institute	Blizard Institute

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

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Institution(s) other than Queen Mary that will provide some teaching for the programme

Barts Health NHS Trust

Programme Outline

The MSc Emergency and Resuscitation Medicine is a three year 180 credit programme designed to offer advanced training in resuscitation medicine to trainees predominantly in Emergency Medicine but also to be of interest to trainees in all acute care specialities. It is delivered by distance learning and is not campus based. The course consists eight modules over two years covering:

- Academic medicine
- Pathophysiology of shock and resuscitation
- Cardiac arrest, airway skills, analgesia and sedation
- Emergency care
- Trauma Care
- Diagnostic techniques in critical illness
- Toxicology and critical illness
- Resuscitation in pre-hospital care and mass casualty situations

Each module is 15 credits and consists 15-20 one hour lectures delivered on line. For each of these the students will be tasked with exercises and further reading to be reviewed at one week with an on line tutorial of approximately one hour.

In year 3 each student is asked to complete a 10000+/-500 word 60 credit dissertation.

Aims of the Programme

This MSc aims to assist doctors, paramedics and advanced nurse practitioners 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. 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 so marking the graduate as having a sub-specialty interest and skill set. 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.

What Will You Be Expected to Achieve?

This MSc is designed to enable the student to gain an in depth understanding of emergency and resuscitation medicine with the focus on patients presenting to the Emergency Department. In the first module students will learn basic skills to aid identifying reading material, reviewing papers and clinical study design. These skills will be used in their subsequent personal study. Subsequent modules will help the students to develop an in depth and sophisticated understanding of shock, tissue hypoxia, organ failure and resuscitation. In the first year students will learn about the pathophysiology of shock and the tools used to treat this. The focus is on common medical conditions and how these interact to cause shock and organ failure. In year 2 these skills are further developed and include learning about the imaging and biochemical tools that are used in assessing and diagnosing critical illness. In year 2 the student is also introduced to trauma shock and toxicology. In the final module students will learn about the unique challenges of the pre-hospital and mass casualty environment. In year 3 the students will have the opportunity to write a 10000 word dissertation on a topic of their choice, developed from the course material and lectures.

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

- Take a sub-specialty interest in resuscitation medicine
- Offer a high standard of care and take a leadership role in resuscitation
- 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	Understanding of diagnostic work up in the early phases of resuscitation, including imaging and blood tests.

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A 7	Core knowledge of acute toxicology and CBRN events as applied to critical illness.
A 8	Knowledge of pre-hospital 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	Undertake evaluation of diagnostic information gained from ECG, blood gas analysis and imaging (radiographs, computed tomography and ultrasound) and their application to clinical practice.
B 7	Ability to identify and treat toxidromes resulting from poisoning and CBRN related illness.
B 8	Ability to apply the skills developed in the previous modules into the pre-hospital environment.
B 9	Perform a detailed literature search and synthesize 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	Synthesize 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 most appropriate diagnostic tools to answer clinical questions, synthesize the information obtained from imaging to offer high standards of patient care.
C 7	To evaluate clinical presentations identifying the toxidromes that guide treatment and antidotes, to understand when to call a major incident and critically assess risks to staff.
C 8	Understand and evaluate the differing priorities of care in the hospital and pre-hospital environments.
C 9	Develop skills in written communication and discussion, synthesize data to improve patient care .

How Will You Learn?

All modules are based on an on-line learning platform. Lectures are recorded by experts in their field. These are released at a rate of two/three per week. Students listen to these in their own time. Each lecture is accompanied by course work. The course work consists of reading around the topic and assignments. These are directed by the course tutor. Students will be divided into groups with each group assigned a task. Each group will have an assigned lead, that changes with each task. This will facilitate group discussion and learning. Students will communicate via google hang outs, skype and/or notice boards. These include case studies, guidelines review, identifying FOAMed resources and literature appraisal. These tasks will be presented to the lecturer at an on line tutorial one week post lecture release.

Students will be expected to attend the on line tutorials to discuss the topic studied and to discuss their assigned work. Students will be expected to contribute to their assigned group task and the lead to present a written report as described above. All students will lead several groups per module. Students will be expected to listen to all lectures and to participate in online tutorials.

Students will take 4 x 15 Credit modules each year, for the first two years. Students wishing to complete the MSc award will take a 3rd dissertation research year, worth 60 credits. Each module runs for around 10 consecutive weeks, except for the trauma module (ICM7050), which runs over 4 weeks. Study breaks are for two weeks at Christmas and Easter, and 8 weeks in the summer. For the first two years the programme runs From September to December (Semester 1) and January to April (Semester 2). The final year will extend to April-June (Semester 3) for completion and submission of the dissertation.

Each module represents 150 hours of notional study – this includes self-directed reading, lectures, tutorials, assessments and assignments. Each module will consist of around 20 lectures, 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 of around 110 hours per module equating to around 11 hours each week. The MSc. therefore requires a time commitment of around 600 hours annually for three years.

The dissertation is 60 credits. The title will be proposed by the student at the start of their 3rd academic year, with final submission in June. All proposed titles must be agreed by the course tutor. All students will be assigned a tutor to advise on their work. Marking will be by a tutor assigned by the course lead and be different to the course work tutor.

How Will You Be Assessed?

Programme assessment will include MCQ exams and written essay-style assignments. Each module is assessed as follows:

- Each student is expected to present a writing assignment of 900-1100 words for each module. This is marked as 0-100% with a passmark of 50%. These writing assignment will be linked to the lectures delivered and each student will have an assignment that links to one or more lectures. The writing assignment may be a case report combined with analysis of care delivered against international standards, a literature critical review, producing or an appraisal of a guideline, or a problem solving exercise. Students will be encouraged to share and discuss their marks and feedback for mutual development.
- To assess knowledge there will be a multiple choice on-line question paper at the end of each module. Again the passmark is set at 50%. This will assess the basic knowledge taught in each module.

Students must listen to all lectures and attend online tutorials. 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 enables the development oral presentation skills. Students will be required to identify, analyse and evaluate relevant scientific papers and guidelines then synthesize this to a presentation. this will be linked to the essay style assignments but is not marked.

Dissertation:

Students wishing to complete with an MSc will also need to undertake and pass a 60 credit 10000 dissertation 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 learnt over the proceeding two years, such as literature searches, critical appraisal, guideline development and FOAMed resources.

How is the Programme Structured?

Please specify the full time and part time programme diets (if appropriate).

The programme will be offered part time study over 3 academic years, with credit value distributed equally over this time frame. Students will be required to meet the standard progression hurdle from year one to year two and pass 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 (Compulsory, 15 Credits)
- The physiology of shock, shock syndromes and tools of resuscitation (Compulsory, 15 Credits)
- Cardiac arrest, airway management, oxygenation, analgesia and procedural sedation (Compulsory, 15 Credits)
- Emergency Care (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.

- ICM7050 - Trauma the disease (Compulsory 15 Credits)
- Diagnostic tools in critical illness (Compulsory 15 Credits)
- toxicology and CBRN (Compulsory 15 Credits)
- Pre Hospital care and mass casualties(Compulsory 15 Credits)

There will be no further teaching for PG Dip students.

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

- Dissertation in Emergency Medicine (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 2

Academic Year of Study PT - Year 2

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Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Trauma the Disease	ICM7050	15	7	Compulsory	2	Semester 1
Diagnostic Tools in Critical Illness	ICM7078	15	7	Compulsory	2	Semester 1
Toxicology and CBRN	ICM7079	15	7	Compulsory	2	Semester 2
Pre Hospital Care and Mass Casualties	ICM7049	15	7	Compulsory	2	Semester 2

Academic Year of Study PT - Year 3

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Dissertation in Emergency Medicine	ICM7048	60	7	Core	3	Semesters 1-3

What Are the Entry Requirements?

For doctors:

- A medical degree
- Two or more years basic training in Emergency Medicine/anaesthesia/general medicine/cardiology/acute surgery/intensive care medicine/pre-hospital care
- Current employment in emergency medicine, critical care, acute medicine, observation medicine or pre-hospital care. Part time work of at least two days per week is accepted.

For Nurses:

- an undergraduate degree at 2:1 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.
- 5 years experience in emergency and critical care nursing
- A letter of support from the departmental lead or educational lead confirming that the applicant will have the support of their department.

For paramedics:

- a degree in paramedic science at 2:1 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.
- 5 years experience working as a paramedic OR 4 years experience working as a critical care paramedic or in a dedicated HEMS system
- A letter of support from the departmental lead or educational lead confirming that the applicant will have the support of their department.

For all applicants:

- English language skills defined by IELTS language test scores of academic standard 7.0 or QMUL recognized equivalent; exempt if medical education completed in English.
- Successful application by personal statement of 500-1000 words explain the reasons for applying for this MSc and what each

candidate hopes to gain from their study.

How Do We Listen 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 Emergency Medicine programme would be asked to nominate representative(s), who would be asked 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 asked to provide comment/feedback on any issues raised by the student representatives.

The institute operate an Education Committee, which will advise the 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.

Academic Support

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 coordinator when appropriate.

Students undertaking the final dissertation year will be allocated a dedicated tutor at the start of the year, depending on the subject chosen.

Programme-specific Rules and Facts

The programme will adhere to all agreed local institute regulations and guidelines, subject to and superseded by any changes to QMUL academic regulations and student policy.

Students must achieve sufficient credits/module marks to progress to the second developmental year.

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

Specific Support for Disabled Students

The Blizard institute are committed to supporting disabled students of all backgrounds, and have close links with QMUL 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

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semester. All efforts will be made to support these students in collaboration with the services offered by QMUL.

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 QMUL for diagnosed students.

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

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

31 Jan 2017

Date Programme Specification approved by Taught Programmes Board

01 Mar 2017