

## Programme Specification

Awarding Body/Institution	Queen Mary, University of London
Teaching Institution	Queen Mary, University of London
Name of Final Award and Programme Title	Master of Science (MSc) Clinical Science (Infection Sciences) PG Dip and PG Cert in Clinical Science
Duration of Study / Period of Registration	3 years
QM Programme Code / UCAS Code(s)	A3U5
QAA Benchmark Group	
FHEQ Level of Award	Level 7
Programme Accredited by	Academy of Health Sciences - details to be confirmed by NHS
Date Programme Specification Approved	27 Jul 2011
Responsible School / Institute	Blizard Institute of Cell and Molecular Science

Schools also involved in teaching part of the programme

### Programme Rationale

The NHS Modernising Scientific Careers programme has introduced an education, training and career framework for the scientific workforce for the NHS, each stage of which is supported by an appropriate academic award that provides the underpinning knowledge requirement at each level. The Scientist Training Programme includes a taught Masters degree in each Healthcare Science themed area. The NHS commissioning body has issued a provisional contract to Queen Mary for one cohort of students, starting in 2011, but as a successful institution we would be viewed as preferred providers for subsequent cohorts.

In future Queen Mary intends to rebid for the streams in blood sciences and clinical engineering. The establishment of Queen Mary as a provider of courses within the Modernising Scientific Careers programme should also provide future opportunities to expand into provision for other themes and at different levels in the programme.

The existing courses such as the MSc in Clinical Microbiology will benefit from this programme as a significant amount of delivery can be shared between courses, providing opportunities for inter-professional learning.

Students undertaking the course will be employed by the NHS in 3-year training programmes, and should have excellent opportunities for future employment within the training framework.

Queen Mary has set up a Scientist Training Programme Steering Group – Chaired by Professor Mike Curtis - in order to support and promote the development and delivery of a part-time Masters course that embodies the ethos of the Modernising Scientific Careers (MSC) programme. This steering group created the comprehensive tender document to the NHS that:

- demonstrates the ability and willingness of Queen Mary to develop and deliver 1 cohort of a part-time Masters programme within a three-year period
- encompasses and engenders the principles, aims and the new ethos and practical provision of training embedded in the MSC

programme

- complies with the MSC academic specification as set out in the invitation to bid document
- demonstrates a commitment, willingness and ability to commence the part-time Masters programme by the commencement date of Autumn 2011
- articulates how the Masters degree will be delivered part-time over a period of three academic years in order to ensure graduation in July of year 3.

During the compilation of the tender documents the Theme Teams have worked to dovetail existing master course content with the new MSC modules and core curriculum content to create a purpose built curriculum and course delivery framework to deliver a new Masters Degree in Clinical Science

Through this iterative process the Theme Teams has created a new and enhanced Masters Course that builds on the reputation of existing course material and that reflects the ethos and model of the MSC Programme and that will provide the underpinning knowledge and practice based skills required by STP trainees as outlined in the curriculum specification.

### **Educational Aims of the Programme**

The overall aim of the programme is to produce graduates with the knowledge and intellectual skills required to provide, develop and advance specialist scientific services within healthcare systems, in conjunction with the NHS Modernising Scientific Careers Programme.

Queen Mary will award Master's degrees to Trainees who have demonstrated:

- a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study or area of professional practice
- a comprehensive understanding of techniques applicable to their own research or advanced scholarship
- originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline
- conceptual understanding that enables the student:
  - to evaluate critically current research and advanced scholarship in the discipline
  - to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

Typically, holders of the qualification will be able to:

- deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences
- demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level
- continue to advance their knowledge and understanding, and to develop new skills to a high level.

And holders will have:

- the qualities and transferable skills necessary for employment requiring:
  - the exercise of initiative and personal responsibility
  - decision-making in complex and unpredictable situations
  - the independent learning ability required for continuing professional development.
- proficiency in Clinical Practice and Inter-professional Skills demonstrated by
  - the ability to work with all sectors within the Healthcare Environment
  - the ability to understand the structure of the NHS and the role Healthcare Scientists play
  - the ability to manage the work place and interact with colleagues
  - being able to lead and demonstrate leadership skills
  - being competent in diagnostic aspects of the Healthcare Scientist Role
  - the ability to communicate with patients

## Learning Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills and other attributes in the following areas. The programme outcomes are referenced to the relevant QAA benchmark statement(s) (see above) and the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (2008), and relate to the typical student. Additionally, the SEEC Credit Level Descriptors for Further and Higher Education 2003 and Queen Mary Statement of Graduate Attributes have been used as a guiding framework for curriculum design.

Knowledge and understanding of:	
A 1	Knowledge of infection science and its applications, and awareness of current problems and research approaches appropriate to specialism
A 2	Structure and function of all the main systems (circulatory, skeletal, nervous, respiratory, sensory, gastrointestinal and endocrine)
A 3	Context of research and audit within NHS and roles of Healthcare Scientists in research for patient benefit and innovation

Intellectual skills - able to:	
B 1	deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences
B 2	demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level
B 3	continue to advance their knowledge and understanding, and to develop new skills to a high level

Transferable skills - able to:	
C 1	exercise initiative and personal responsibility
C 2	make decisions in complex and unpredictable situations
C 3	learn independently as required for continuing professional development

Practical skills - able to:	
D 1	have a comprehensive understanding of techniques applicable to their own research or advanced scholarship
D 2	evaluate methodologies and develop critiques of them
D 3	be competent in diagnostic aspects of the Healthcare Scientist Role

## Teaching, Learning and Assessment Strategies

In view of the geographic distribution of the students and each student's individual prior learning and experience the teaching will be delivered as a blend of on site attendance and distance learning. For the majority of students the first year of study will be predominantly by day release with the second and third years of study being by distance learning and short periods of block release.

The assessment strategies are designed to allow all students to be assessed in a variety of styles throughout the course from traditional written and practical examinations, essays, and MCQ to scientific presentations and case presentations. Professional reflective learning is also included within learning and assessment strategies.

## Programme Structure(s) and Requirements, Levels and Modules

The course comprises 8 modules. All modules are compulsory and all are at level 7. Some of the taught material will be shared with students on the MSc Clinical Microbiology allowing the cohort to mix with clinicians and other professionals studying Clinical Microbiology.

The first year of study commences with a short block of study "Generic health care sciences. Integrating science with professional practice". The module is specific to Infection Sciences and is designed to ensure that all students have a solid basic knowledge and practical skill set before moving to their work base.

The rest of the modules for the year are delivered by day release attendance and distance learning. These modules are "Introduction to clinical microbiology" and "Molecular biology and Pathogenesis".

The second year of study is a blend of on site learning and distance learning and includes the modules "Professional and research skills" "Clinical Microbiology and Infection" "Antimicrobial therapy" and "Epidemiology and public health".

Throughout years one and two students will be required to complete short projects at their place of employment in preparation for the final module "Research Project and Dissertation". This module will span years 2 and 3. Organisation, timing and delivery of the main research project and the three short projects will be discussed individually with the students and their NHS trainers at the earliest opportunity during the first year (likely to be during / or immediately after the student has completed their rotation with the most relevance to their chosen specialism) in order to maximise flexibility, within constraints for assessment deadlines required to complete the course and graduate by summer of the third year.

Students who are unable to complete a project can be considered for the award of Postgraduate diploma in clinical science. Students who complete modules in generic health care sciences, introduction to clinical microbiology and molecular biology can be considered for the award of the postgraduate certificate in clinical science.

	Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
X	Generic health care sciences. Integrating science with professional practice	TBC	15	7	Core	1	Semesters 1-3
X	Introduction to clinical microbiology	TBC	30	7	Core	1	Semesters 1-3
X	Molecular biology and pathogenesis	TBC	15	7	Core	1	Semesters 1-3
X	Professional and research skills	TBC	15	7	Core	2	Semesters 1-3

## Programme Title: Clinical Science (Infection Sciences)

X	Clinical microbiology and infection	TBC	15	7	Core	2	Semester 2 & 3
X	Antimicrobial therapy	TBC	15	7	Core	2	Semester 1
X	Epidemiology and public health	TBC	15	7	Core	2	Semesters 1-3
X	Research project	TBC	60	7	Core	3	Semesters 1 & 2

### Criteria for Admission to the Programme

Second class degree in appropriate biomedical science (or equivalent).  
IELTS 7.0.

All students must be employed by the NHS on the Scientist Training Programme for the duration of the course.

### Quality Assurance Mechanism

Include details of: SSLC meetings, student feedback mechanisms, personal tutor arrangements, programme induction, programme review and monitoring.

#### Induction

- At the start of the course all students will receive a course handbook including information about the taught course, how to use the electronic classroom and advice on independent learning.
- Mechanisms for student support (academic, technical, administrative and pastoral) are all in place and information about this will be available during the induction day, in the course handbook and online.

#### Personal Tutor arrangements

- each student will be assigned a personal tutor for academic support. This personal tutor will liaise closely with the employers and workplace tutors for each student.

#### Annual Programme Review / Monitoring

The programme will be reviewed on an annual basis.

The main aim of the Annual Programme Review is to consider and comment on the following:

- the progress achieved with the previous year's action plan
- the extent to which intended learning outcomes are being attained by the students
- the cumulative impact of small/incremental changes
- the academic standards set and achieved by students
- the quality of the learning opportunities being provided

The Course Director will review the MSc Clinical Science (Infection Science) in light of compliance with MSC and QMUL's Learning, Teaching and Assessment Strategy with any good or innovative practice being identified so that it can be more widely disseminated, and issues identified reflected appropriately in the action plan.

The MSc Clinical Science (Infection Sciences) action plan will be shared for review in this instance with a range of NHS Service partners reflecting the geographical spread of the provision.

The Annual 1 Day Programme Symposium involving key delivery staff, NHS service experts and trainee employers will provide the opportunity to review the content of the course action plan in relation to any developments in practice that may require adjustment of the curriculum. Any recommendations for change will be reported to the Authority so as to ensure the Authority is

kept informed about developments in practice that may require any adjustment of curriculum.

The aim of the review process is to ensure that a high quality of academic provision is maintained by assessing the quality and standards of programmes and the achievement of Trainees

Monitoring.

The programme is managed by a Programme Management Committee (PMC) comprising the course organiser, teaching associate and module conveners. The PMC will meet termly. A representative of the NHS employers are invited to attend the PMC. The student representative is invited to attend the PMC.

Programme Review

All activities will be monitored by the PMC to maintain the quality of the course. In addition to ongoing review, content and delivery will be reviewed formally annually and together with outcomes of student assessment and student feedback and changes made to the programme accordingly.

Student feedback:

Informal feedback from students will be sought throughout the course, both in discussion, and via the message-board system or via the student representative.

- Formal feedback from students will be sought at the end of each module in the form of a questionnaire.

- Feedback will be sought about a number of areas including:

- i. course content

- ii. course delivery

- iii. technical aspects of accessing the learning experiences

- iv. quality of associated materials

- v. The relevance to the workplace

- This feedback will be used to make alterations to the forthcoming modules as well as to the course overall for the following year.

- More detailed formal feedback about course structure will be sought at the end of each term and at the end of the year.

### Programme-specific Assessment Regulations (if applicable)

In the case of programmes that deviate / do not comply with the Academic Regulations further information regarding the nature of any difference and/or deviation should be stipulated in detail.

None

### Employers Links

Please provide details of any links with employers e.g.

- Details of advisory panels that include current or potential employers;
- Organisations that regularly employ graduates from this programme and the roles that graduates undertake.
- Student prizes donated by organisations that may offer employment to graduates from this programme.

If there are no links with employers consider the learning outcomes and transferable skills and explain how these might be used to inform employers about the qualities and skills a graduate from this programme might be expected to have.

The students are employed by the NHS and the contract to provide this course is by competitive tendering to the NHS.

The course has to be accredited by the Academy of Health Sciences - details to be confirmed by NHS

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## Programme Specification Approval

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**Person completing Programme Specification**

Michele Branscombe

**Person responsible for management of programme**

Professor Armine Sefton

**Date Programme Specification produced/amended  
by School or teaching and learning committee**

5th July 2011

**Date Programme Specification approved by  
Programme and Module approval Board**

27 Jul 2011