

Programme Title: Biomedical Science (Medical Microbiology)



## 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) Biomedical Science (Medical Microbiology) PG Cert or PG Dip Biomedical Science (Medical Microbiology)
Name of Interim Award(s)	
Duration of Study / Period of Registration	2 years part time or 1 year full time
QM Programme Code / UCAS Code(s)	A3W7, A3WW
QAA Benchmark Group	
FHEQ Level of Award	Level 7
Programme Accredited by	Institute of Biomedical Science (IBMS) tbc
Date Programme Specification Approved	26 Sep 2013
Responsible School / Institute	Blizard Institute

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

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

### Programme Outline

The programme will provide the essential underpinning academic learning for the continuing professional development of biomedical scientists. Teaching will be delivered by day release (part time students) or full time study and distance learning methods. The programme includes input by specialism experts in NHS service roles, is closely linked by partnership working with the work-place and delivers research-informed teaching from within a research-rich environment. Throughout the course interprofessional learning is strongly encouraged as the students study with other healthcare science professionals and clinicians who are following the MSc in Clinical microbiology or the MSc Clinical Science(Infection Science)

### 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.

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

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- 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 medical microbiology
- conceptual understanding that enables the student:
  - to evaluate critically current research and advanced scholarship in medical microbiology
  - 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 manage the work place and interact with colleagues
  - being able to lead and demonstrate laboratory management skills
  - being competent in diagnostic aspects of the Biomedical Scientist Role

### What Will You Be Expected to Achieve?

A board knowledge of medical microbiology with a focus on laboratory medicine and laboratory management.

#### Academic Content:

A 1	Demonstrate a comprehensive knowledge and critique of medical microbiology and its applications.
A 2	Critique the principles of research and audit within NHS and roles of biomedical scientists in research for patient benefit and innovation
A 3	Demonstrate a systematic understanding the principles of laboratory management and laboratory health and safety legislation.

#### Disciplinary Skills - able to:

B 1	Interpret diagnostic tests and critically evaluate data from diagnostic methods
B 2	Demonstrate an understanding and appraisal of the role of the manager within the laboratory setting and understand the importance of health and safety legislation
B 3	Evaluate and critique the methodologies in medical microbiology
B 4	Interpret and evaluate relevant research publications

Attributes:	
C 1	Adapt current understanding to evaluate complex issues systematically and creatively for communicating findings to specialists and other professional groups.
C 2	Identify information needs appropriate to diagnostic and epidemiological studies in the health service and in microbiology research
C 3	Demonstrate an understanding and appraisal of the principles and practices of independent learning as required for continuing professional development

### How Will You Learn?

Formal teaching comprises lectures, workshops, problem based learning, practicals and demonstrations. The lecturers are specialists in their field and are invited from many institutions in the UK.

The practical classes are an important component of the course and are designed to give you the maximum hands-on experience, particularly in medical microbiology. You are encouraged to relate current practices in their sponsoring institution to their studies, and to discuss and critically evaluate these techniques with their colleagues (including clinicians and clinical scientists) in the light of their formal teaching. The practical classes are taught in the purpose-built teaching laboratory, which is well equipped with all necessary materials and is based on a routine clinical microbiology laboratory.

In addition to the formal face to face teaching, students use on line learning materials in the university's electronic learning environment QMPlus. These materials include discussion threads, chat rooms, lecture notes (PDF documents) and quizzes.

Self-directed learning, by reading and reviewing literature to supplement the lectures, is essential and you are encouraged to use the library facilities of the department and the University. All students have access to the library and computing facilities of the University.

To enable the full-time students to participate fully in discussions about laboratory techniques and clinical cases with their part-time colleagues who are attending by day-release, additional tuition is provided during the attachment to the Blizard Institute. The additional tuition provides further hands-on practical experience using material designed to reflect the clinical samples and laboratory procedures in a routine hospital laboratory. The students are encouraged to complete the practical work as individuals to gain maximum experience, but discussion within the group and with the tutor is encouraged.

Additional theoretical tutorials are also used throughout the year to broaden the students' experience of clinical microbiology. These tutorials include case presentations to and by the students, workshops, discussion sessions, question-and-answer sessions, and oral presentations by the students. Full-time students receive additional assignments to be completed throughout the year to allow them to monitor their own progress. Full-time students are also encouraged to attend the regular clinical journal club and research meetings within the Centre.

### How Will You Be Assessed?

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.

## How is the Programme Structured?

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 and the MSc Clinical Science (infection science) allowing the cohort to mix with clinicians and other professionals studying Clinical Microbiology.

The rest of the modules are delivered by day release attendance (for part time students) supported by distance learning.

The first year modules are "Introduction to clinical microbiology" and "Molecular biology and Pathogenesis".

The second year includes the modules "Professional and research skills", "Clinical Microbiology and Infection", "Antimicrobial therapy", "laboratory management" and "Public health and communicable disease controls".

Throughout years one and two students will study "Professional and research skills"; this module is taught across both years but assessment is focussed in the second year. First year teaching of this module is designed to enable the students to appreciate core research skills before commencing their project. Students will be required to prepare for and complete the final module "Research Project and Dissertation" throughout years 1 and 2. Organisation, timing and delivery of the research project will be discussed individually with the students and their NHS project supervisor at the earliest opportunity during the first year in order to maximise flexibility, within constraints for assessment deadlines required to complete the course.

Students who are unable to complete a project can be considered for the award of Postgraduate diploma in Biomedical Science (medical microbiology).

### Academic Year of Study 1

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Introduction to clinical microbiology	ICM7092	30	7	Compulsory	1	Semesters 1-3
Molecular biology and pathogenesis	ICM7093	15	7	Compulsory	1	Semesters 1-3

### Academic Year of Study 2

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Professional and research skills	ICM7091	15	7	Compulsory	2	Semesters 1-3
Public health and communicable disease control	ICM7035	15	7	Compulsory	2	Semesters 1 & 2
Antimicrobials	ICM7034	15	7	Compulsory	2	Semester 1
Clinical microbiology and infection control	ICM7094	15	7	Compulsory	2	Semester 2 & 3
Laboratory management	ICM7098	15	7	Compulsory	2	Semesters 1-3

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Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Project and Dissertation	ICM7099	60	7	Compulsory	2	Semesters 1-3

### What Are the Entry Requirements?

Minimum of a 2:1 degree in biomedical science (or degree with a significant content of medical microbiology) or equivalent. Applicants who are in full time employment within the NHS but who do not reach academic standards but have appropriate work based experience may be considered for a place on the course at the discretion of the dean of Postgraduate Studies (SMD).

Applicants for part time study must hold a full-time appointment or attachment in a medical/clinical microbiology department of a medical school, hospital, HPA or other appropriate institution for the duration of their studies.

Non-native speakers must achieve a minimum of IELTS 7.0; TOEFL paper 610, internet 100 and provide certification of this. Students are required to achieve a minimum of 6.0 in their written element (or equivalent in TOEFL). Students must be able to sit examinations at a British Council Centre, or a similar approved centre, under invigilation or be able to attend examinations in the UK.

If the offer of a place is conditional upon achieving the above standard in an English language test and the student has achieved IELTS 6.5; TOEFL paper 580, internet 92 within the last 12 months at the discretion of the course organiser, they can be offered the opportunity to attend the pre-sessional course for at least 5 weeks instead of taking IELTS or TOEFL again. At the end of the pre-sessional course the student will be assessed by the Queen Mary Language and Learning Unit to confirm that the student has the language skills to complete the course.

### 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 year 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. Staff-Student Liaison Committees meet regularly throughout the year.

Each school/institute operates a Learning and Teaching Committee, or equivalent, which advises the School/Institute Director of Taught Programmes 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.

All schools/institutes operate an Annual Programme Review of their taught undergraduate and postgraduate provision. APR is a continuous process of reflection and action planning which is owned by those responsible for programme delivery; the main document of reference for this process is the Taught Programmes Action Plan (TPAP) which is the summary of the school/institute's work throughout the year to monitor academic standards and to improve the student experience. Students' views are considered in this process through analysis of the NSS and module evaluations.

### Academic Support

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.

### Programme-specific Rules and Facts

Applicants for part time study must hold a full-time appointment or attachment in a medical/clinical microbiology department of

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a medical school, hospital, HPE or other appropriate institution for the duration of their studies.

### Specific Support for Disabled Students

Queen Mary has a central Disability and Dyslexia Service (DDS) that offers support for all students with disabilities, specific learning difficulties and mental health issues. The DDS supports all Queen Mary students: full-time, part-time, undergraduate, postgraduate, UK and international at all campuses and all sites.

Students can access advice, guidance and support in the following areas:

- Finding out if you have a specific learning difficulty like dyslexia
- Applying for funding through the Disabled Students' Allowance (DSA)
- Arranging DSA assessments of need
- Special arrangements in examinations
- Accessing loaned equipment (e.g. digital recorders)
- Specialist one-to-one "study skills" tuition
- Ensuring access to course materials in alternative formats (e.g. Braille)
- Providing educational support workers (e.g. note-takers, readers, library assistants)
- Mentoring support for students with mental health issues and conditions on the autistic spectrum.

### Links With Employers, Placement Opportunities and Transferable Skills

Accreditation with the Institute of Biomedical Science (IBMS) will be sought. A student obtaining a degree accredited by the IBMS may use the qualification towards the higher specialist portfolio and chartered scientist status.

For students who do not wish to pursue a career as a biomedical scientist they will be equipped with a board range of laboratory skills and knowledge of medical microbiology which may be utilised in the pharmaceutical industry, research environments, environmental health services and other health science careers.

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## Programme Specification Approval

**Person completing Programme Specification**

Michele Branscombe

**Person responsible for management of programme**

Michele Branscombe

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

**Date Programme Specification approved by Taught Programmes Board**

26 Sep 2013