

Template C4



Programme Specification

Title of Course: *MSc Biomedical Science Medical Microbiology*

Date first produced	31/05/2012
Date last revised	15/04/2024
Date of implementation of current version	01/09/2023
Version number	5
Faculty	Faculty of Health, Science, Social Care & Education
School	School of Life Sciences, Pharmacy and Chemistry
Department	Department of Biomolecular Sciences
Delivery Institution	Kingston University

This Programme Specification is designed for prospective students, current students, academic staff and employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes and content of each modules can be found in the course VLE site and in individual Module Descriptors.

SECTION 1: GENERAL INFORMATION

Award(s) and Title(s): <i>Up to 10 pathways</i>	MSc Biomedical Science Medical Microbiology
Intermediate Awards(s) and Title(s): <i>There are 4 Intermediate awards for each pathway</i>	Pg Cert Biomedical Science Medical Microbiology Pg Diploma Biomedical Science Medical Microbiology
Course Code <i>For each pathway and mode of delivery</i>	PPBSM1BSM01 PFBSM1BSM01
UCAS code <i>For each pathway</i>	N/A

Award(s) and Title(s): <i>Up to 10 pathways</i>	MSc Biomedical Sciences Medical Microbiology with Professional Placement
Intermediate Awards(s) and Title(s): <i>There are 4 Intermediate awards for each pathway</i>	Pg Cert Biomedical Sciences Medical Microbiology with Professional Placement Pg Diploma Biomedical Sciences Medical Microbiology with Professional Placement
Course Code <i>For each pathway and mode of delivery</i>	
UCAS code <i>For each pathway</i>	

Award(s) and Title(s): <i>Up to 10 pathways</i>	MSc Biomedical Sciences Medical Microbiology with Management Studies
Intermediate Awards(s) and Title(s): <i>There are 4 Intermediate awards for each pathway</i>	Pg Cert Biomedical Sciences Medical Microbiology with Management Studies Pg Diploma Biomedical Sciences Medical Microbiology with Management Studies
Course Code <i>For each pathway and mode of delivery</i>	
UCAS code <i>For each pathway</i>	

Award(s) and Title(s): <i>Up to 10 pathways</i>	MSc Biomedical Sciences Medical Microbiology with Management Studies with Professional Placement
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Intermediate Awards(s) and Title(s): <i>There are 4 Intermediate awards for each pathway</i>	Pg Cert Biomedical Sciences Medical Microbiology with Management Studies with Professional Placement Pg Diploma Biomedical Sciences Medical Microbiology with Management Studies with Professional Placement
Course Code <i>For each pathway and mode of delivery</i>	
UCAS code <i>For each pathway</i>	

RQF Level for the Final Award:	Level 7: Master's Degree
Awarding Institution:	Kingston University
Teaching Institution:	Kingston University
Location:	Penrhyn Road
Language of Delivery:	English
Modes of Delivery:	Full Time Part-time With Professional Placement
Available as:	
Minimum period of registration:	Full Time - 1 Part-time - 2 With Professional Placement - 2
Maximum period of registration:	Full Time - 2 Part-time - 4 With Professional Placement - 3
Entry Requirements:	Lower second class honours degree and above or equivalent in Biomedical science or other related biology and medical science degrees will be considered on an individual basis. All applicants must demonstrate sufficient understanding of mammalian biology and immunology. Prior study of microbiology is strongly preferred. For international students: An IELTS academic test in English with an overall score of 6.5, with no element below 6.0, or meet the scores listed on the alternative online tests
Programme Accredited by:	IBMS
QAA Subject Benchmark Statements:	N/A
Approved Variants:	n/a

Is this Higher or Degree Apprenticeship course?	

For Higher or Degree Apprenticeship proposals only

Higher or Degree Apprenticeship standard:	n/a
Recruitment, Selection and Admission process:	n/a
End Point Assessment Organisation(s):	n/a

SECTION 2: THE COURSE

A. Aims of the Course

MSc Biomedical Science Medical Microbiology/with Professional Placement programme are;

- to develop and extend beyond honours degree level students' knowledge of topics in Biomedical Science,
- to prepare students for employment, research, further study and lifelong learning by developing their intellectual, problem solving, practical and key (transferable) skills,
- to produce graduates with a knowledge and skills base that allows pursuit of careers in a wide variety of work environments,
- to encourage students to develop an informed, reflective and critically analytical approach to the subject of Biomedical Science,
- to provide an education in the theoretical and applied aspects of pathology at cellular and systemic levels,
- to convey an understanding of the theoretical and practical basis of modern molecular medicine,
- to develop an awareness of organisational relationships and interdependencies between specialist disciplines within diagnostic pathology,
- to develop the in-depth study of Medical Microbiology,
- to convey an understanding of the molecular basis of immunological mechanisms,
- to develop the ability to source information and to understand and critically appraise a research paper or article, including an assessment of the experimental design and methods of statistical analysis,
- to develop competence in the public presentation of scientific work,
- to enable students to carry out a sustained piece of independent research work related to Medical Microbiology,
- to develop the students' research oriented practical and analytical skills,
- to enable students to write an extended report on their research work.
- Give students on the 2-year version an opportunity to develop further skills, preparing them for higher levels of employment!

MSc Biomedical Science Medical Microbiology with Management Studies/with Professional Placement programme are;

- to prepare students for employment, research, further study and lifelong learning by developing their intellectual, problem solving, practical and key (transferable) skills
- to produce Masters graduates with a knowledge and skills base that allow pursuit of careers in a wide variety of work environments
- to provide an education in the theoretical and applied aspects of pathology at cellular and systemic levels
- to convey an understanding of the theoretical and practical basis of modern molecular medicine
- to develop an awareness of organisational relationships and interdependencies between specialist disciplines within diagnostic pathology
- to convey an understanding of the molecular basis of immunological mechanisms
- to develop the in depth study of Medical Microbiology,
- to develop the ability to source information and to understand and critically appraise a research paper or article, including an assessment of the experimental design and methods of statistical analysis,

- to enable students to carry out a sustained piece of independent research work related to Medical Microbiology
- to develop the students' research oriented practical and analytical skills,
- to enable students to write an extended report on their research work
- to develop a wide range of management, business and leadership/team skills appropriate for managers and entrepreneurs in complex business environments.
- to develop competence in the presentation of scientific work and business plans
- to encourage students to develop an informed, reflective and critically analytical approach to the subject of Biomedical Science and Management
- to develop and extend beyond honours degree level students' knowledge of topics in Biomedical Science and Management

B. Intended Learning Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills and other attributes in the areas noted in the table below. There are no QAA benchmarks for this subject at level 7, but the programme outcomes are referenced to the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (2014), and the IBMS 'Criteria and Requirements for the Accreditation and Re-accreditation of MSc Degrees in Biomedical Science', and relate to the typical student.

The programme learning outcomes are the high-level learning outcomes that will have been achieved by all students receiving this award. They must align to the levels set out in the ['Sector Recognised Standards in England'](#) (OFS 2022).

Programme Learning Outcomes					
	Knowledge and Understanding		Intellectual Skills		Subject Practical Skills
	On completion of the course students will be able to:		On completion of the course students will be able to		On completion of the course students will be able to
A10	the ethical implications of Biomedical Science research and Business Management	B9	present their own research in a clear and concise fashion in writing and in scientific poster presentations	C6	Evaluate a business plan and make a strategic analysis of a business environment
A13	a wide range of management, business and leadership/team skills appropriate for managers and entrepreneurs in complex business environments	B6	have the ability to apply independent judgement and original thought in a variety of contexts relevant to Biomedical Science	C2	demonstrate competence in a range of practical and analytical techniques appropriate to Biomedical Science
A12	the range of career opportunities available within the field of Biomedical Sciences and Management	B7	demonstrate self management and autonomy in the planning, organisation and conduct of an independent research project;	C3	demonstrate skills in the evaluation, presentation and interpretation of laboratory data
A11	the statistical and computing techniques required to assess and present their own data	B8	to critically evaluate their own findings as well as those of others	C4	demonstrate new and/or improved practical skills and apply them in a research setting
A9	the principles of objective scientific research	B10	demonstrate the capacity to challenge existing management practises and develop new approaches towards achieving business success	C5	apply their subject specific knowledge to the planning, design and delivery of an experimental research project
A8	the increasingly important relationships between traditionally separate subjects within the broader field of Biomedical Science	B5	use their generic intellectual and key skills in their lifelong learning and future employment	C7	Give clear account of how the skills and knowledge acquired during studies can be applied in a work-place environment
A7	the principles and practice of a range of topics within an elected specialist route (Haematology or Medical Microbiology)	B4	assemble, interpret and critically evaluate information and data from a variety of sources (including academic literature)	C1	understand, and be able to comply with, health and safety in the laboratory

A6	the human immune system, its components and interactions at a molecular level and the relationships between the science of immunology and the aetiology and diagnosis of disease	B2	undertake the analysis and interpretation of experimental data	C8	demonstrate skills in the evaluation, presentation and interpretation of entrepreneurial skills and demonstrate commercial awareness relevant to biomedical sciences and biotechnology
A5	the role of the pathology laboratory within the wider context of health care	B1	demonstrate the ability to learn independently		
A4	the principles and applications of a range of molecular techniques relevant to Biomedical Science	B3	apply subject knowledge and understanding to the solving of problems in Biomedical Science		
A2	the principles of constructive criticism in Biomedical Science				
A1	the principles and practice of a variety of topics in Biomedical Science				
A3	the biological basis of disease				

In addition to the programme learning outcomes, the programme of study defined in this programme specification will allow students to develop the following range of Graduate Attributes:

1. Creative Problem Solving
2. Digital Competency
3. Enterprise
4. Questioning Mindset
5. Adaptability
6. Empathy
7. Collaboration
8. Resilience
9. Self-Awareness

C. Outline Programme Structure

This programme is offered in full-time or part-time mode, and leads to the award of MSc in Biomedical Science with Management Studies. Entry is normally at Level 7 with BSc (Hons) or equivalent qualifications (See section D). Intake is normally in September.

Each level is made up of four modules each worth 30 credit points and a summer research project module worth 60 credit points. All students will be provided with the University regulations, and full details of each module will be provided in module descriptors and student module guides.

MSc Biomedical Science Medical Microbiology

Level 7							
MSc Biomedical Science Medical Microbiology							
Core modules	Module code	Credit Value	Level	Teaching Block	Pre-requisites	Full Time	Part Time
Immunology and the Biology of Disease	LS7002	30	7	1 and 2	a,b		
Immunology and the Biology of Disease	LS7002	30	7	1		1	1
Research Project	LS7010	60	7	3	a		
Research Techniques & Scientific Communication	LS7001	30	7	1 and 2	a		
Optional Modules							
Microbial pathogenesis and control of infectious disease	LS7004	30	7	1 and 2	a,c		
Taxonomy of microorganisms and diagnosis of infectious disease	LS7003	30	7	1 and 2	a,c		

MSc Biomedical Sciences Medical Microbiology with Professional Placement

Level 7							
MSc Biomedical Sciences Medical Microbiology with Professional Placement							
Core modules	Module code	Credit Value	Level	Teaching Block	Pre-requisites	Full Time	Part Time
Immunology and the Biology of Disease	LS7002	30	7	1		1	1
Microbial pathogenesis and control of infectious disease	LS7004	30	7	1		1	1
Research Project	LS7010	60	7	3		1	1
Research Techniques & Scientific Communication	LS7001	30	7	2		1	1
Taxonomy of microorganisms and diagnosis of infectious disease	LS7003	30	7	2		1	1
Optional Modules							
Professional Placement	CH7900	120	7	Year long		2	2

Level 7 information

Full time students attend two days per week

Part time students attend one day per week

Students exiting the programme with 60 level 7 credits are eligible for the award of PgCert in Biomedical Science Medical Microbiology

Students exiting the programme with 120 level 7 credits are eligible for the award of PgDip in Biomedical Science Medical Microbiology

MSc Biomedical Sciences Medical Microbiology with Management Studies

Level 7							
MSc Biomedical Sciences Medical Microbiology with Management Studies							
Core modules	Module code	Credit Value	Level	Teaching Block	Pre-requisites	Full Time	Part Time
Business in Practice	CI7600	30	7	1		1	1
Immunology and the Biology of Disease	LS7002	30	7	1		1	1

Research Project	LS7010	60	7	3		1	1
Research Techniques & Scientific Communication	LS7001	30	7	2		1	1
Taxonomy of microorganisms and diagnosis of infectious disease	LS7003	30	7	2		1	1
Optional Modules							

MSc Biomedical Sciences Medical Microbiology with Management Studies with Professional Placement

Level 7							
MSc Biomedical Sciences Medical Microbiology with Management Studies with Professional Placement							
Core modules	Module code	Credit Value	Level	Teaching Block	Pre-requisites	Full Time	Part Time
Business in Practice	CI7600	30	7	1		1	1
Immunology and the Biology of Disease	LS7002	30	7	1		1	1
Professional Placement	CH7900	120	7	Year long		2	2
Research Project	LS7010	60	7	3		1	1
Research Techniques & Scientific Communication	LS7001	30	7	2		1	1
Taxonomy of microorganisms and diagnosis of infectious disease	LS7003	30	7	2		1	1
Optional Modules							

Level 7 information

Full time students attend two days per week

Part time students attend one day per week

Students exiting the programme with 60 level 7 credits are eligible for the award of PgCert in Biomedical Science Medical Microbiology

Students exiting the programme with 120 level 7 credits are eligible for the award of PgDip in Biomedical Science Medical Microbiology

Students exiting the programme with 60 level 7 credits are eligible for the award of PgCert in Biomedical Science Medical Microbiology with Management Studies

Students exiting the programme with 120 level 7 credits are eligible for the award of PgDip in Biomedical Science Medical Microbiology with Management Studies

D. Principles of Teaching, Learning and Assessment

Students on the MSc in Biomedical Science with Management Studies (with Professional Placement) come from a wide variety of backgrounds (e.g. recent graduates from Kingston, recent graduates from other UK institutions, those returning to study after a break, overseas students), and all are likely to find the programme challenging for different reasons. These individual challenges, coupled with the higher demands of a postgraduate programme that is completed within 12 months, guide our teaching and assessment which are designed to ensure that students are given the best opportunity to learn effectively.

The Research Project, which comprises one third of the programme, is designed as a 'capstone' project, and aims to give students the opportunity to use and synthesise the knowledge and skills they have acquired during their degree e.g. by using applied "real world learning" (such as working on a live project for an employer), presenting work in formats appropriate to wider audiences, practice new and/or improved laboratory skills, and - most importantly - demonstrate the ability to independently solve complex problems

There are four Curriculum Design Principles, and these are linked to the teaching, learning and assessment strategies for the programme (see section C of this document) as follows:

- Assessment for learning designed at programme level with opportunities for feedback and 'feedforward' explicitly specified at the design stage
 - All assessments have been designed at level 7; students are encouraged to reflect on the link between intended learning outcomes and the requirements for each assessment, and ensure that they understand how they can meet these. Examples of this are the practical report in LS7004 (Microbial pathogenesis and control of infectious disease) which is formatively assessed two weeks before final submission, and the peer-assessed practice exam question in LS7005 (Anaemia, haemostasis and blood transfusion)
 - Students will receive feedback on all assessments; this will take a variety of forms and may be individual, group or generic and may be provided by teaching staff, peers (fellow students) or visiting experts.
 - Feedback will enable the students to learn from each assessment experience and feedforward that learning to future assessments, most critically to the final assessments in the summer Research Project module. The 'Research proposal' assessment in LS7001 (Research techniques and scientific communication) is designed to prepare students for their Research Project by allowing them to consider preparatory aspects of their research such as; the generation of a suitable hypothesis, correct experimental design to test this hypothesis, ethical considerations, health and safety.
- Research-led and research informed teaching with increased opportunities for postgraduate research and capstone projects
 - The Curriculum content is heavily research-led and research informed.
 - Modules incorporate opportunities to explore current developments in the field.
 - Teaching teams draw on the academic strengths and research interests of staff.
 - Students complete their MSc by conducting a research project.

- A robust, academically-led personal tutor system which helps to personalize students' experience and track their academic development (see section G below)
- An embedded employability curriculum at discipline level and explicit links to the co-curriculum;
 - Employability skills are embedded into several modules, including 'applying for funding' (LS7001), and 'industry specific recruitment information' (e.g. from external expert practitioner lecturers in specialist option modules – see section E3 of this document),
 - Communication skills ('presenting your published work') are emphasized in all modules in a variety of media, including written, oral and poster presentations.
 - Key laboratory-based skills are included in the taught modules and in the independent research projects, for which students may have an opportunity to take up a placement outside Kingston University.
 - Specialist visiting lecturers from Industry, the Health Service and research organisations and also visits to these organisations provide great insight into employability skills

E. Support for Students and their Learning

Students are supported by:

In order to assist students in achieving their learning outcomes, the Faculty of Science, Engineering, and Computing has a raft of initiatives to support postgraduate students in both academic and pastoral issues. These are summarised below, and include skills workshops that offer English language support, academic surgeries, detailed induction and orientation programmes at the start of the academic year, and subject-based conference style events. Advice on generic study skills is available on the electronic learning management system (StudySpace) to which all students have access; this includes advice on writing, oral communication, numeracy, problem-solving and career management, among others.

Students also have access to SEC Academic Success Centre (SASC), which provides a 'drop in' service giving advice on all non-subject based aspects of academic work including;

- grammar and punctuation,
- academic structure
- referencing and plagiarism
- maths skills

Students are encouraged to discuss academic and pastoral concerns with their Course Leader/personal tutor, and all academic staff operate a system of Office Hours during which students can consult their lecturers. In addition the Faculty employs Student Achievement Officers who are available in both drop-in and appointment sessions to support students in all aspects of their education, including pastoral issues.

The Personal Tutor Scheme (PTS) has been designed to ease a student's transition into postgraduate study by building a rapport between themselves and academic staff as soon as possible, so personalising their experience at Kingston. Students are placed in small tutorial groups (3-4 students), and are encouraged to work together to provide mutual support. Where possible these groups will include a mix of Kingston alumni, UK and overseas students, and they will meet with their personal tutor two to three times in each teaching block.

The PTS aims;

- To provide appropriate academic advice and guidance to students throughout their time at Kingston by monitoring their progress and helping to identify individual needs

- To foster a close and engaged academic relationship with students and advise and refer students to other University services as appropriate
- To help to develop students' ability to be self-reliant and self-reflective and their ability to use feedback to best advantage
- To provide a link between curricular and co-curricular aspects of employability

Summary of Student Support

- A personal tutor who provides academic and personal support
- A Module Leader for each module
- A Course Leader to help students understand the programme structure,
- Technical support to advise students on IT and the use of software
- A designated programme administrator
- An induction week at the beginning of each new academic session
- Staff Student Consultative Committee
- Canvas – a versatile on-line interactive intranet and learning environment
- A substantial Academic Success Centre that provides academic skills support
- Student support facilities that provide advice on issues such as finance, regulations, legal matters, accommodation, international student support etc.
- Disabled student support
- The Students' Union
- Careers and Employability Service

F. Ensuring and Enhancing the Quality of the Course

The University has several methods for evaluating and improving the quality and standards of its provision. These include:

- External examiners
- Boards of study with student representation
- Annual review and development
- Periodic review undertaken at subject level
- Student evaluation
- Moderation policy

G. Employability and work-based learning

Students' employability skills are developed throughout this course, both through activities that are embedded within the syllabus and from services offered by the Careers and Employability Service. Biomedical Science modules have been designed to meet the requirements of a Master's level qualification, and as such prepares students for a career in hospital-based biomedical science laboratories and related industries. The management module provides skills relevant to management careers, including entrepreneurship and small business development .

Students are helped to reflect on the transferable skills they have acquired and their relevance to employment. Students are also encouraged to explore the job market and possible career paths, and to consider attributes that employers look for beyond essential academic skills, such as initiative, teamwork, time management, motivation to improve performance, and appropriate communication skills. Students are encouraged to take advantage of opportunities within and outside of the university to develop skills through voluntary roles such as Course Representative. Students are also encouraged to develop clear ideas about possible career

options, and are offered assistance and guidance in the preparation of CVs and for job applications and interviews.

Current employers are involved in the delivery of the course, and ensure that the content of the course, and the knowledge and skills that students acquire, are appropriate to workplace requirements.

Emphasis is also placed on the transferability of these skills, and graduates of this course have taken up posts in a variety of employment settings including the NHS, commercial and research laboratories (for example GlaxoSmithKline, the Animal Health and Veterinary Laboratories), and diagnostic instrument and reagent manufacturers. Skills learned and developed during the research project have often allowed students to secure job interviews and employment and/or to finalise their employment ambitions. Some students continue with their studies, and the course is an excellent basis for those who intend to pursue a research career via a PhD. Additionally, the degree can be used as a qualification for entry to PGCE teacher training.

For students already in employment the course offers an opportunity to enhance their knowledge and to develop their practical, intellectual and key skills to assist them in their career development.

Work-based learning, including sandwich courses and higher or degree apprenticeships

Work placements are actively encouraged – although it is the responsibility of individual students to source and secure such placements. This allows students to reflect upon their own personal experience of working in an applied setting, to focus on aspects of this experience that they can clearly relate to theoretical concepts and to evaluate the relationship between theory and practice.

Kingston University is now offering an optional two year postgraduate programme with an integrated work placement component within the programme. This option is available for both international and full-time home/EU students. The onus to find and secure the placement is on you, but you can make use of the University's career support services ([KU Talent](#)) to help you. Placements must be secured by 15 May 2018. The placement will be undertaken after the taught portion of your programme and before the dissertation. The placement will be for a minimum of 10 months, and a maximum of 12 months. It must be full time: 30-40 hours per week, with no more than 60 days of 'inactivity' and usual working hours such as 9/9:30am-5.30/6pm. The placement cannot be a 'self-employed' year, you need to be working for a company. You will do the placement between the taught portion of the course, and the dissertation period. Care is taken to involve students in the day-to-day work of these laboratories, allowing students to gain an understanding of how important 'employability skills' are in a 'real-world' situation. As the work placement is an assessed part of the course, if you are an international student, you will be issued a two year visa to cover both the taught and the work placement components upon meeting the Home Office's requirements (including the 5-year time limit on Tier 4 study - see the [UKCISA website](#)). The placement Year is a 'pass/fail' module, and the grade will not affect your degree classification (i.e. Merit, Distinction), but will appear on your final transcript. Your performance and attendance will be regularly monitored throughout the placement year. During the placement year you will still be registered as a Kingston student, so you will have access to the usual student facilities and will qualify for a Student Oyster and Student Rail Card

H. Other sources of information that you may wish to consult

Further information on the requirements of the Institute of Biomedical Science can be found on the official site: <https://www.ibms.org/>

I. Development of Course Learning Outcomes in Modules

This table maps where course learning outcomes are **summatively** assessed across the modules for this course. It provides an aid to academic staff in understanding how individual modules contribute to the course aims, a means to help students monitor their own learning, personal and professional development as the course progresses and a checklist for quality assurance purposes.

Module Code		Level 7						
		LST004	LST003	LST002	LST001	LST010	CIT600	CH7900
Knowledge & Understanding	A10				S	S		
	A13							
	A12							
	A11	S	S		S	S		
	A9	S	S		S	S		
	A8	S	S	F	S	S		
	A7	S	S			S		
	A6	S		S				
	A5	S	S	F	S			
	A4				S			
	A2	S	S	S	S	S		
	A1	S	S	S	S	S		
	A3	S	S	S				
Intellectual Skills	B9	S	S		S	S		
	B6	S	S	S	S	S		
	B7	S			S	S		
	B8	S	S		S	S		
	B10							
	B5	S	S	S	S	S		
	B4	S	S	S	S	S		
	B2	S	S	S	S	S		
	B1	S	S	S	S	S		

	B3	S	S	S		S		
Practical Skills	C6							
	C2	S	S	S		S		
	C3	S	S	S		S		
	C4					S		
	C5					S		
	C7	S	S	F				
	C1	S	S	S		S		
	C8							

Students will be provided with formative assessment opportunities throughout the course to practise and develop their proficiency in the range of assessment methods utilised.