

This Course Information Form provides the definitive record of the designated course

General Course Information

Course Title	MSc Microbiology in Public Health
Qualification	MSc
FHEQ Level	7
Intermediate Qualification(s)	PG Cert PG Dip Microbiology in Public Health
Awarding Institution	University of Bedfordshire
Location of Delivery	AA University Square Campus
Mode(s) of Study and Duration	Full time over 12 (Oct intake) or 15 months (Feb intake) Part time pathway typically over 2-3 years
Professional, Statutory or Regulatory Body (PSRB) accreditation or endorsement	Not applicable
UCAS Course Code	Not applicable
External Benchmarking	QAA Quality Code section A1 (The Framework for Higher Education Qualifications) at Level 7 (QAA, 2014) http://www.qaa.ac.uk/en/Publications/Documents/qualifications-frameworks.pdf QAA Master's Degree Characteristics (2015) http://www.qaa.ac.uk/en/Publications/Documents/Masters-Degree-Characteristics-15.pdf QAA Benchmark statement: BSc Biomedical Science (2015) http://www.qaa.ac.uk/en/Publications/Documents/SBS-Biomedical-sciences-15.pdf
Entry Month(s)	October or February

Why study this course

It is long-established that specific bacteria, viruses, fungi and parasites, cause a range of infectious diseases but it is becoming increasingly apparent that others are associated with health. Furthermore, emerging infections, such as MERS, Ebola and Zika, and the challenge of antimicrobial resistance mean this area is a global health priority, attracting investment from governments and industry. This course will equip you with knowledge and skills for a range of careers related to microbiology in public health, including in diagnostic and reference laboratories, in public and private sectors, or management and policy related roles in local and national government agencies.

Educational Aims

This MSc course is designed to equip graduates with an advanced understanding of microbiology in a public health context and to ensure they have the skills for employment related to this area of expertise. It is recognised that the challenge of infectious disease and health requires a multidisciplinary approach and as such, the range of topics considered during this course will enable graduates to converse with contributors from a range of professions and academic backgrounds. This is underpinned by the collaborative nature of the course delivery, involving the School of Life Sciences and the School of Healthcare practice. The content of individual units will be contextualised within the broader area microbiology in public health ensuring that the links between the disciplines is apparent. The course links theory to practical applications, ensuring that graduates have skills of enquiry, scholarship and technical expertise to respond in innovative ways to the developing and future challenges in microbiology in public health. Students will be challenged to consider this subject in the context of local and international needs as infection respects no borders; urbanisation and global travel ensures a local issue can readily become an international concern.

Course Structure

The Units which make up the course are:

Unit Code	Level	Credits	Unit Name	Core or option
BHS0VV-6	7	30	Microorganisms in health and disease	Core
PUB002-6	7	15	Epidemiology in public health	Core
PUB008-6	7	15	Public health protection	Core
BHS0WW-6	7	15	Molecular and diagnostic microbiology	Core
BHS0XX-6	7	15	Control of infectious disease	Core
PUB017-6	7	15	Principles, policies and issues in public health	Core
BHS0YY-6	7	15	Microbiology and public health research methods	Core
BHS0ZZ-6	7	60	Microbiology research project	Option
PUB010-6	7	60	Dissertation	Option

Course-Specific Regulations

There are no course-specific regulations. Standard Academic Regulations shall apply.

Entry requirements

Standard entry requirements with a requirement for a good honours degree (lower second class or higher) in a relevant life science or health-related subject.

Additional Course Costs

Not applicable

Graduate Impact Statements

The course has been designed to develop graduates who are able to:

- Apply knowledge of microbiology in a public health context to promote health and understand, diagnose, prevent, manage and control infectious disease.
- Work professionally in a multidisciplinary context to research, investigate or manage public health issues related to microbiology.
- To respond to future challenges related to microbiology in public health in innovative, creative and imaginative ways to provide understanding and solutions as new issues arise.

Course Learning Outcomes

Upon successful completion of this course, you should be able to:

- CLO1. Evidence a systematic understanding and a critical awareness of the role of microorganisms in health and disease.
- CLO2. Exhibit a conceptual understanding of molecular and diagnostic microbiology, including critical evaluation of current research and methodologies.
- CLO3. Exhibit a conceptual understanding of strategies to control infectious disease, including critical evaluation of current research and methodologies.
- CLO4. Demonstrate a critical awareness of contemporary issues within public health, related to microbiology, and apply your knowledge to formulate appropriate evidence-based strategies to improve health.
- CLO5. Analyse and evaluate public health policy and practices from international, national and local perspectives to support and develop evidence-based practice.
- CLO6. Demonstrate the ability to access and evaluate microbiology and public health information from a variety of sources and to communicate the principles both orally and in writing in a way that is organised and topical, and recognises the limits of current hypotheses.
- CLO7. Evidence a comprehensive understanding of research methodology and advanced scholarship to design and conduct a hypothesis-driven research project in a contemporary area of microbiology in public health, appropriately interpreting and discussing your findings.
- CLO8. Apply a range of transferable skills (initiative, personal responsibility, effective communication and decision-making) that include clear demonstration of independent learning commensurate with that expected from postgraduate students. This includes a detailed understanding of the social, moral and ethical considerations associated with any proposed research activity.

PSRB details

Not applicable

Learning and Teaching

The course has a variety of approaches to deliver a wide-ranging curriculum and support all students in developing a broad range of skills. The links between microbiology and public health will be emphasised and discussed in each taught unit. Weekly teaching sessions will be held to initiate learning of specific topics, which will be supplemented with additional guided learning materials and e-learning resources in the University's Virtual Learning Environment. Case studies and problem based learning will be used in appropriate units. Laboratory practical classes will enable you to apply and develop key skills in microbiology. The collaborative nature of learning permeates the course providing opportunities for group work within teaching sessions, especially within a laboratory context and problem based learning assessments.

You will be actively engaged in the learning process throughout and encouraged to take responsibility for identifying and addressing your own learning needs. Throughout the course you are also encouraged to identify and reflect on prior-professional and personal experience in

relation to the core curriculum. Transferable and enterprise skills are promoted, together with an emphasis on developing the skills to support lifelong learning.

The choice of microbiology project or public health dissertation will enable you to investigate a specific topic in detail. This will involve independent study, under the guidance of an allocated supervisor, leading towards a dissertation or project report. Practical research projects will typically be within the University and we cannot guarantee external placement opportunities. Nevertheless, it is envisaged that some external projects will be possible, perhaps within student's established employment.

Assessment

Assessment is integral in all units to check that you have met the threshold standards expected of all graduates. They are also linked to learning, designed to develop key subject specific and transferable skills for future employment. The requirements of each assessment will be detailed in a formal assessment brief document and discussed in teaching sessions. The Microbiology and public health research methods unit (BHS0YY-6), which has a single summative assessment, will be supported with an earlier formative submission to enable students to gain feedback on their initial progress as they develop their research proposal. Units that include an end of unit examination shall include a formative exam experience to prepare students.

The assessment tasks will include:

- End of unit examination (unseen written examinations);
- Problem-based learning, based on case studies, with poster presentation of findings;
- Formal public health reports and briefing papers
- Laboratory notebook and laboratory reports;
- Literature review;
- Research proposal;
- Oral presentation.

Assessment Map

Unit Code	^a C /O	Unit week numbers														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BHS0VV-6	^b C										WR- Post			<i>Feed back</i>		Ex
PUB002-6	^b C															Ex
PUB008-6	^b C									WR-I			<i>Feed- back</i>		WR-I	
BHS0WW-6	^c C												WR- Lab			Ex, <i>Feed- back</i>
BHS0XX-6	^c C								CW- LR			<i>Feed- back</i>				Ex
PUB017-6	^c C						CW- OT			<i>Feed- back</i>				CW- OT		
BHS0YY-6	^c C														WR-I	
BHS0ZZ-6	^d O															PJ-Art, PJ- Proj
PUB010-6	^d O															DI

^aC = core unit; O = optional unit

^b Unit which runs in semester 1

^c Unit which runs in semester 2

^d Students will take one of these units in their 3rd semester of study

Grades and feedback from summative assessments will be available within 15 working days of submission in line with university expectations. (Note: only feedback that falls within the 15 week semester is shown above).

Developing your employability

In addition to developing your specialist knowledge and understanding, there is a pervasive emphasis on developing your approach and attitude to work by emphasising and encouraging the professional standards expected by employers. You will be exposed to guest lectures delivered by professionals from relevant industries, giving students an insight into what work in such employment involves.

The University also has a programme of seminars and workshops designed to help you recognise and boost the attributes expected and appreciated by employers. This is supplemented by course specific workplace visits as opportunities arise.

The University also has an optional programme of internal and external internships that provide excellent opportunities to gain additional work experience. The non-course specific nature of such internships provides an opportunity for selected students to broaden their perspective of employment.

After Graduation

Graduates from this course may progress into diverse careers related to microbiology in public health, including in diagnostic and reference laboratories in public and private sectors, in academic or commercial research and development, or management and policy related roles in local and national government agencies.

Additional Information

The course is designed to expose students to recent advances in the microbiology in public health and, where possible, visits to biomedical science laboratories will enable students to witness their application in diagnostic and/or other research facilities, thus complementing practical activities at the University of Bedfordshire.

Student Support during the course

The University of Bedfordshire provides a range of central support services that students can access. This includes academic advice and support, Health and Well-being services and guidance with regards to financial matters. These are detailed within the student support area of the university. International students can access pre-sessional English courses that increase their preparedness for studying in the UK - information can be found on the university website.

A full induction week programme will be provided in which you will:

- learn about help with English Language for non-native English speakers;
- meet the members of the teaching team and key faculty staff;
- have the student support system explained;
- complete enrolment forms;
- receive guidance on how to view the course handbook through the university's computer-based virtual learning environment;
- tour the relevant University sites/facilities, including the Learning Resources Centre, the Department of Life Sciences, the Student Centre and the Postgraduate/Continuing Professional Development Centre;
- receive training on the university's virtual learning environment and the use of information technology;
- receive information on plagiarism and ethics in research; and
- receive training on referencing and creating bibliography for written assignments.

Other presentations will also be given by representatives of the Student Information Desk, the Learning Resources Centre, the Professional and Academic Development team and the Student Union.

You will be allocated a personal tutor to provide a spectrum of support ranging from assisting in the induction process to personal development planning. Support will also be provided by the course manager, unit coordinators, lecturers/supervisors and your own peer groups.

The university's computer-based virtual learning environment (VLE) provides a great deal of help and back-up material such as lecture notes and additional background information on all units. In some cases there are discussion boards and you can get in touch with lecturers and tutors via e-mail. The VLE also provides a certain amount of distance learning, revision material and formative assessments as well as containing all

the administrative material needed such as the unit handbooks and regular announcements. In addition students may email unit co-ordinators for an appointment to discuss academic issues arising from a unit.

The course requires you to carry out laboratory based practical and research projects. Additional risk assessment will be carried out for laboratory based activities for disabled students and laboratory health and safety procedures will be followed. Where identified, special support will be provided if you have disabilities - you should discuss the details with the course coordinator.

It is the University's policy that all international students attend compulsory communication skills classes organised by the language centre. Despite having the requisite English language entry qualification, you may require extra language support. You are expected to attend either 2, 4 or 6 hours of classes per week, depending on your ability as determined by the Password Language test taken during the induction period.

You will be notified of generic skills workshops organised by the Professional and Academic Development team and you are strongly encouraged to attend sessions relevant to this course.

Student feedback is monitored through the student course representatives at regular course meetings and at intermittent portfolio board meetings. Each unit is also surveyed, in class, through a centrally administered Bedfordshire Unit Survey scheme; the results of these surveys are posted in the university's computer-based virtual learning environment.

Course Equality Impact Assessment

Question	Y/N	Anticipatory adjustments/actions
The promotion of the course is open and inclusive in terms of language, images and location?	Y	n/a
Are there any aspects of the curriculum that might present difficulties for disabled students? For example, skills and practical tests, use of equipment, use of e-learning, placements, field trips etc.	Y	Practical laboratory work requires physical activity that may involve chemical, biological, mechanical or electrical hazards. Safety of students, staff and the public is a priority. Whilst reasonable adjustments can usually be made to allow students with disabilities to undertake the practical work safely, individuals with severe disabilities that constitute a safety risk in the lab practicals may not be able to undertake this work.
Are there any elements of the content of the course that might have an adverse impact on any of the other groups with protected characteristics ¹ ?	Y	Similarly, some of the chemical or biological agents used in practical sessions may have a particular impact on pregnancy, nursing mothers and the unborn child. Potential hazards will be highlighted and control measured put in place for all students – but individual risk assessments and control measures can be put in place if students that may be particularly affected make themselves known to the academic in charge. Such individuals will be urged to consult their clinicians for guidance on such activities.
If the admission process involves interviews, performances or portfolios indicate how you demonstrate fairness and avoid practices that could lead to unlawful discrimination?	n/a	n/a

¹ Age, Gender reassignment, Marriage and civil partnership, Pregnancy and maternity, Race, Religion and belief, Sex, Sexual orientation
MSc Microbiology in public health

Confirm that you have considered that the course learning outcomes and Graduate Impact Statements are framed in a non-discriminatory way.	Y	n/a
Confirm that the course handbook makes appropriate reference to the support of disabled students.	Y	n/a

Administrative Information – Faculty completion	
Faculty	Faculty of creative arts, technology and science
Portfolio	Life Sciences
Department/School	School of Life Sciences
Course Coordinator	Dr Arthur Hosie
Trimester pattern of operation	Oct (Trimester 1), Feb (Trimester 2), June (Trimester 3; project & dissertation units only)
PSRB renewal date (where recognised)	Not applicable
Version number	1/17
Approved by (c.f. Quality Handbook ch.2)	University Validation Panel
Date of approval (dd/mm/yyyy)	13/06/2017
Implementation start-date of this version (plus any identified end-date)	2017/2018
Study model type (e.g. study centre)	

Form completed by:

Name: Dr Arthur Hosie..... **Date:** ...22/08/2018.....

Authorisation on behalf of the Faculty Teaching Quality and Standards Committee (FTQSC)

Chair:

Date:

Course Updates

Date (dd/mm/yyyy)	Nature of Update	FTQSC Minute Ref:

Administrative Information – Academic Registry completion	
Route code (post approval)	
JACS / HECoS code (KIS)	
SLC code (post approval)	
Qualification aim (based on HESA coding framework)	

Annexes to the Course Information Form

*These annexes will be used as part of the approval and review process and **peer academics** are the target audience.*

General course information

Course Title	MSc Microbiology in Public Health
Qualification	MSc
Route Code (SITS)	<i>MSMPHAAF+MSMBPAAF</i>
Faculty	Faculty of creative arts, technology and science
Department/School/Division	School of Life Sciences
Version Number	1/17

Annex A: Course mapping of unit learning outcomes to course learning outcomes

Unit code	BHS0VV-6	PUB002-6	PUB008-6	BHS0WW-6	BHS0XX-6	PUB017-6	BHS0YY-6	BHS0ZZ-6	PUB010-6										
Level	7	7	7	7	7	7	7	7	7										
Credits	30	15	15	15	15	15	15	60	60										
Core or option	Core	Core	Core	Core	Core	Core	Core	Option	Option										
Course Learning Outcome (number)	<i>Insert LO1 and/or LO2 for each unit into cell corresponding to the course learning outcome</i>																		
1	LO1																		
2				LO1															
3					LO1														
4		LO1	LO1			LO1 & LO2													
5			LO2			LO1 & LO2													
6	LO2			LO2	LO2		LO2	LO1											
7		LO2					LO1	LO1 & LO2	LO1 & LO2										
8	LO2				LO2			LO2											

Annex B: Named exit or target intermediate qualifications

This annex should be used when Schools wish to offer intermediate qualifications which sit under the main course qualification as named exit or target awards, rather than unnamed exit/default awards.

Section 1: General course information

Intermediate Qualification(s) and titles	PG Dip Microbiology in Public Health
Mode(s) of Study and Duration	Full time over 12 (Oct intake) or 15 months (Feb intake) Part time pathway typically over 2-3 years
Type of Intermediate Qualification(s)	This intermediate qualification is an exit award for students achieving 120 credits at level 7.
Route Code(s) (SITS) of Intermediate Qualification(s)	x

Section 2: Qualification unit diet

One table to be used for each intermediate qualification

Confirmation of unit diet for:	PG Dip Microbiology in Public Health	
The units to achieve the credits required may be taken from any on the overall diet for the main course qualification		<input type="checkbox"/>
A combination of units from a restricted list must be taken to achieve the credits required (specify the list below)		<input checked="" type="checkbox"/>
A specific set of units must be taken to achieve the credits required (specify units below)		<input type="checkbox"/>

List of units (if applicable):-	
BHS0VV-6	Microorganisms in health and disease
PUB002-6	Epidemiology in public health
PUB008-6	Public health protection
BHS0WW-6	Molecular and diagnostic microbiology
BHS0XX-6	Control of infectious disease
PUB017-6	Principles, policies and issues in public health
BHS0YY-6	Microbiology and public health research methods

Section 3: Course structure and learning outcomes

One table to be used for each intermediate qualification

Intermediate qualification and title					PG Dip Microbiology in Public Health									
The Units which make up this course are:					Contributing towards the learning outcomes <i>Insert LO1 and/or LO2 for each unit into cell corresponding to the course learning outcome</i>									
Unit Code	Level	Credits	Unit Name	Core or option	1	2	3	4	5	6	7	8	9	10
BHS0VV-6	7	30	Microorganisms in health and disease	Option	✓					✓		✓		
PUB002-6	7	15	Epidemiology in public health	Option				✓			✓			
PUB008-6	7	15	Public health protection	Option				✓	✓					
BHS0WW-	7	15	Molecular and diagnostic microbiology	Option		✓				✓				
BHS0XX-6	7	15	Control of infectious disease	Option			✓			✓		✓		
PUB017-6	7	15	Principles, policies and issues in public health	Option				✓	✓					
BHS0YY-6	7	15	Microbiology and public health research methods	Option						✓	✓			

Annex C: Course mapping to FHEQ level descriptor, subject benchmark(s) and professional body or other external reference points

One set of mapping tables to be produced for the course and each named intermediate qualification

Course (or intermediate) qualification and title	MSc Microbiology in Public Health
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FHEQ Descriptor for a higher education qualification	FHEQ Level 7 (QAA, 2014) http://www.qaa.ac.uk/en/Publications/Documents/qualifications-frameworks.pdf	Course Learning Outcome(s)							
		1	2	3	4	5	6	7	8
<ul style="list-style-type: none"> 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. 		✓	✓	✓	✓	✓	✓	✓	
<ul style="list-style-type: none"> a comprehensive understanding of techniques applicable to their own research or advanced scholarship 			✓	✓	✓	✓		✓	
<ul style="list-style-type: none"> 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 		✓	✓	✓	✓	✓	✓	✓	
<ul style="list-style-type: none"> conceptual understanding that enables the student: <ul style="list-style-type: none"> 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 		✓	✓	✓	✓	✓	✓	✓	
<ul style="list-style-type: none"> 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 		✓	✓	✓	✓	✓	✓	✓	
<ul style="list-style-type: none"> demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level 					✓	✓		✓	✓
<ul style="list-style-type: none"> continue to advance their knowledge and understanding, and to develop new skills to a high level. 		✓	✓	✓	✓		✓	✓	✓
<ul style="list-style-type: none"> the qualities and transferable skills necessary for employment requiring: <ul style="list-style-type: none"> the exercise of initiative and personal responsibility - decision-making in complex and unpredictable situations the independent learning ability required for continuing professional development. 		✓	✓	✓	✓	✓	✓	✓	✓

Subject Benchmark Statement(s)	QAA Benchmark statement: BSc Biomedical Science (2015) http://www.qaa.ac.uk/en/Publications/Documents/SBS-Biomedical-sciences-15.pdf	Evidence and/or Course Learning Outcome(s)							
		1	2	3	4	5	6	7	8
6 Subject-specific knowledge, understanding and skills									
6.4 vii Medical microbiology is the study and investigation of pathogenic microorganisms. A biomedical science graduate will have knowledge of: <ul style="list-style-type: none"> the pathogenic mechanisms of a range of microorganisms public health microbiology the laboratory investigation of a range of infectious diseases, including isolation and identification of microorganisms anti-microbial and anti-viral therapy (including drug resistance) infection control. 		✓	✓	✓	✓	✓	✓	✓	✓
Threshold standard for all Biomedical Sciences									
8.6 On graduating with an honours degree in biomedical sciences, the graduate will have the following core knowledge, understanding and skills:									
i. the ability to explain biomedical sciences phenomena at a variety of levels (from molecule to cell to organ and system function) in the human body in health and disease, the common causes and effects of disease, the body's defence mechanisms and approaches to treatment		✓	✓	✓	✓	✓			
ii. experience and competence in a broad range of appropriate practical techniques and skills relevant to the biomedical sciences including data collection, analysis and interpretation of those data, and testing of hypotheses and the ability to place the work in context and to suggest lines of further investigation						✓	✓	✓	
iii. experience in planning, execution and presentation of a piece of hypothesis-driven work within a supported framework in which qualities such as time management, problem solving, and independence are evident							✓	✓	
iv. the ability to access and evaluate biomedical sciences information from a variety of sources and to communicate the principles both orally and in writing in a way that is organised and topical, and recognises the limits of current hypotheses;						✓			
v. an appreciation of ethical issues and professional integrity and standards and the impact on society of advances in the biomedical sciences									✓

Subject Benchmark Statement(s)	QAA Benchmark statement: BSc Biomedical Science (2015) http://www.qaa.ac.uk/en/Publications/Documents/SBS-Biomedical-sciences-15.pdf	Evidence and/or Course Learning Outcome(s)							
		1	2	3	4	5	6	7	8
vi.	the ability to record data accurately, and to carry out basic manipulation of data (including qualitative data and statistical analysis, when appropriate);						✓	✓	
vii.	the ability to assess the evidence base for scientific claims, by reading primary literature and commenting on the adequacy of the methods, data and interpretation	✓	✓	✓	✓	✓	✓		
viii.	an awareness and understanding of intellectual property issues (IP) issues and how they relate to the innovation process							✓	✓
ix.	strategies which enable them to update their knowledge of the biomedical sciences						✓		✓
Subject-specific threshold standard - Biomedical Science 8.8 On graduating with an honours degree in biomedical science, the graduate will have the following specialist knowledge, understanding and skills:									
i.	the ability to integrate the knowledge of various key subjects to further the understanding of the study, investigation, diagnosis and monitoring of human health and disease	✓	✓		✓	✓	✓		
ii.	knowledge and understanding of various therapeutic strategies applicable to disease states			✓					
iii.	awareness of the current laboratory methods available for the study, investigation, diagnosis and monitoring of human health and disease in clinical and research environments	✓	✓				✓	✓	
iv.	an appreciation of the development and evaluation of new and current methods and therapeutic intervention strategies			✓	✓				

Subject Benchmark Statement(s)	(a) FPH Public Health speciality training curriculum (2015) http://www.fph.org.uk/uploads/PH%20Curriculum%202015_approved.pdf	Course Learning Outcome(s)							
		1	2	3	4	5	6	7	8
Key Area 1. Use of public health intelligence to survey and assess a population's health and wellbeing									
1.1 Address a public health question using data and intelligence by refining the problem to an answerable question or set of questions, determining the appropriate approach and applying that approach.				✓	✓	✓	✓		
1.2 Apply principles of information governance for a range of organisations, and in health protection work.					✓				
1.3 Access data and information from a variety of organisations and sources (including local, national and global); as well as participatory methods for gathering the citizens' voice.					✓	✓	✓		
1.4 Critically appraise the metadata, validity, relevance and complexity of data and data systems in order to assess their quality and fitness for purpose for answering the public health question.				✓	✓	✓	✓		
1.5 Display data using appropriate methods and technologies to maximise impact in presentations and written reports for a variety of audiences.						✓		✓	
1.6 Use and interpret quantitative and qualitative data, synthesising the information to inform action.							✓	✓	
1.7 Undertake a health needs assessment for a defined population for a specific purpose, attempt to implement recommendations from a health needs assessment and demonstrate that the work has been considered at a high level within the organisation.				✓	✓		✓		
1.8 Use public health intelligence to understand and address a health inequality in a subpopulation.				✓	✓		✓		
Key Area 2. Assessing the evidence of effectiveness of interventions, programmes and services intended to improve the health or wellbeing of individuals or populations									
2.1 Define, document and conduct structured reviews of scientific literature relevant to questions about health and health care policy and practice, systematically locating and critically appraising the research evidence to identify strengths and limitations.	✓		✓	✓	✓	✓	✓		
2.2 Formulate balanced evidence-informed recommendations both verbally and in writing using appropriate reasoning, judgement and analytical skills.				✓	✓	✓	✓	✓	
2.3 Build consensus where there are gaps in evidence or controversies on its implications.						✓	✓		
2.4 Identify the need for overviews of research to inform operational or strategic decisions about health and health care and advocate this approach.					✓	✓	✓		
2.5 Produce specifications for structured reviews of research to inform policy and practice.					✓	✓	✓		
2.6 Assess the evidence for proposed or existing screening programmes, using established criteria.		✓	✓	✓		✓	✓		
2.7 Implement or apply evidence based practice.				✓	✓		✓		
Key Area 3. Policy and strategy development and implementation									
3.1 Display an awareness of current national and international policies and strategies that affect health and wellbeing, and their global context.					✓				
3.2 Evaluate a situation and identify the steps required to achieve change, preparing options for action.				✓					
3.3 Appraise options for policy and strategy for feasibility of implementation.					✓				
3.4 Demonstrate consultation with stakeholders, including the public and representatives of the political system, in the development of a strategy.				✓	✓				

Subject Benchmark Statement(s)	(a) FPH Public Health speciality training curriculum (2015) http://www.fph.org.uk/uploads/PH%20Curriculum%20015_approved.pdf	Course Learning Outcome(s)							
		1	2	3	4	5	6	7	8
3.5 Write a strategy [action plan] to address a need for change to improve a public health or health care issue.					✓	✓			
3.6 Lead the implementation of a strategy including demonstrating the ability to solve problems that arise during this process.					✓	✓			✓
3.7 Undertake policy or strategy evaluation using an appropriate method, critically analysing whether desired changes have been achieved.					✓	✓		✓	
Key Area 4. Strategic leadership and collaborative working for health									
4.1 Use a range of leadership styles effectively as appropriate for different settings and organisational cultures.									✓
4.2 Demonstrate appropriate presentation, communication and listening skills, as appropriate for the audience or individual. Communicate in clear written format and in presentations to a range of organisations and audiences.							✓		✓
4.3 Assess, communicate and understand the management of different kinds of risks, including health, financial, reputational and political risks.							✓		✓
4.4 Design, lead and manage complex areas of work in multi-agency settings to a successful conclusion or suitable endpoint within available resources and timescale.									✓
4.5 Demonstrate effective team working in a variety of settings, balancing the needs of the individual, the team and the task.									✓
4.6 Demonstrate an understanding of methods of financial management and show experience of how they are used.									✓
4.7 Handle uncertainty, the unexpected, challenge and potential or actual conflict in a sensitive and successful manner.									✓
4.8 Use influencing and negotiating skills in a setting where you do not have direct authority to advocate for action on a public health issue of local, national or international importance.						✓			✓
4.9 Work collaboratively with the media to communicate effectively with the public.									✓
4.10 Guide, support and develop staff and junior colleagues, receiving and giving constructive feedback and showing an understanding of the potential role of coaching and mentoring.									✓
4.11 Demonstrate and apply an understanding of how mental health and wellbeing can be managed and promoted in staff and yourself in a range of situations.									✓
Key Area 5. Health Improvement, Determinants of Health, and Health Communication									
5.1 Influence or build healthy public policies across agencies, demonstrating an awareness of different social, cultural and religious perspectives that may influence health.						✓			
5.2 Be an advocate for public health principles and action to improve the health of the population or subgroup.						✓			
5.3 Influence community actions, by working with and empowering communities using participatory, engagement or asset-based approaches.						✓			
5.4 Develop a strategy that applies theoretical models of change in order to enable individuals to improve their health.					✓	✓			
5.5 Influence local services to be health promoting.					✓	✓			✓
5.6 Influence the planning, commissioning and evaluation of specific health improvement programmes and preventative services.						✓			✓
5.7 Demonstrate leadership in environmental sustainability with a focus on the links to health and climate change.					✓				✓

Subject Benchmark Statement(s)	(a) FPH Public Health speciality training curriculum (2015) http://www.fph.org.uk/uploads/PH%20Curriculum%202015_approved.pdf	Course Learning Outcome(s)							
		1	2	3	4	5	6	7	8
Key Area 6. Health Protection									
6.1 Demonstrate knowledge and awareness of hazards relevant to health protection.		✓		✓	✓	✓	✓	✓	✓
6.2 Gather and analyse information, within an appropriate timescale, to identify and assess the risks of health protection hazards.						✓	✓		
6.3 Identify, advise on and implement public health actions with reference to local, national and international policies and guidance to prevent, control and manage identified health protection hazards.			✓	✓	✓	✓	✓		
6.4 Understand and demonstrate the responsibility to act within one's own level of competence and understanding and know when and how to seek expert advice and support.								✓	
6.5 Document information and actions with accuracy and clarity in an appropriate timeframe.							✓	✓	
6.6 Demonstrate knowledge and awareness of the main stakeholders and agencies at a local, national and international level involved in health protection and their roles and responsibilities.					✓			✓	
6.7 Demonstrate an understanding of the steps involved in outbreak/incident investigation and management and be able to make a significant contribution to the health protection response.		✓	✓	✓	✓	✓	✓	✓	
6.8 Apply the principles of prevention in health protection work.			✓	✓	✓				
6.9 Demonstrate competence to participate in an unsupervised out of hours (OOH) on call rota.							✓	✓	
Key Area 7. Health and Care Public Health									
7.1 Monitor and assess the impact of preventive and treatment services, appraising and applying routine information and bespoke data sources.			✓			✓	✓		
7.2 Describe and apply the ethical and legal principles of resource allocation in health and care services as it applies to both individuals and groups.					✓				
7.3 Propose plans and develop supporting products (such as service specifications and commissioning policies) for service configuration to address population health needs including a consideration and, if appropriate, an appraisal of examples of different models of healthcare both within the UK and from other countries.				✓	✓				
7.4 Advocate proposals for improving health or care outcomes working with diverse audiences.				✓	✓	✓			
7.5 Describe the stages for evaluation of new drugs and technologies and in order to select and apply these frameworks to inform policy questions.			✓						
7.6 Criticise and appraise service developments for their costs and impacts on health and health inequalities, using health economic tools to support decision making.					✓				
7.7 Appraise, select and apply models of change across health and care systems.					✓		✓		
7.8 Appraise, select and apply tools and techniques for improving safety, reliability and patient-orientation of health and care services.							✓		
Key Area 8. Academic public health									
8.1 Apply and interpret appropriate statistical methods and use standard statistical packages.				✓	✓	✓	✓	✓	
8.2 Apply principles of epidemiology in public health practice.			✓	✓	✓		✓		
8.3 Formulate questions that will allow a structured approach to retrieving and assessing the evidence to inform research, policy and practice.				✓	✓	✓	✓		
8.4 Advise on the relative strengths and limitations of different research				✓	✓	✓	✓	✓	

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		1	2	3	4	5	6	7	8
appropriately to increase understanding about the determinants of population health and promote effective action to improve it.									
10.7 Influences and negotiates successfully at senior organisational levels in both their own organisation and in multiagency settings to achieve effective public health action.									✓
10.8 Operates flexibly as a leader at a senior organisational level, showing understanding of the impact they have on others, and giving effective support to colleagues within teams.									✓
10.9 Is proactive in identifying opportunities to improve population health and taking effective action to influence the corporate work programmes of an organisation to include solutions.									✓
10.10 Uses and promotes public health principles and core values.				✓	✓				✓
10.11 Works flexibly and perseveres through uncertainty, additional unexpected complexity and potential or actual conflict to seek effective outcomes.									✓
10.12 Uses reflective practice regularly to ensure on-going professional and personal development of their public health practice.									✓

Qualification Characteristic	QAA Master's Degree Characteristics (2015) http://www.qaa.ac.uk/en/Publications/Documents/Masters-Degree-Characteristics-15.pdf	Evidence <i>How the course takes account of relevant qualification characteristics documents</i>
1.3 Characteristics of master's graduates "all master's degree graduates have in-depth and advanced knowledge and understanding of their subject and/or profession, informed by current practice, scholarship and research. This will include a critical awareness of current issues and developments in the subject and/or profession; critical skills; knowledge of professional responsibility, integrity and ethics; and the ability to reflect on their own progress as a learner."		This characteristic is at the heart of the course design and permeates all aspects of the course to ensure that graduates possess these key skills.
1.3 Characteristics of master's graduates "Graduates of specialist or advanced study master's are likely to be characterised in particular by their ability to complete a research project in the subject, which in some subjects includes a critical review of existing literature or other scholarly outputs."		Students will undertake either a microbiology research project or public health dissertation.
1.3 Characteristics of master's graduates "Graduates of all types of master's degrees are equipped to enter a variety of types of employment (either subject-specific or generalist) or to continue academic study at a higher level, for example a doctorate (provided that they meet the necessary entry		The course includes specialist knowledge and skills

Qualification Characteristic	QAA Master's Degree Characteristics (2015) http://www.qaa.ac.uk/en/Publications/Documents/Masters-Degree-Characteristics-15.pdf	Evidence <i>How the course takes account of relevant qualification characteristics documents</i>
requirements).”		underpinned with transferable skill training to equip the graduates to enter a range of employments.
<p>2.1 Forms of master's degrees</p> <p>The following characteristics are often associated with specialist or advanced study programmes.</p> <ul style="list-style-type: none"> • They are usually predominantly composed of structured learning opportunities (are 'taught'). Frequently, at least a third of the programme is devoted to a research project, leading to a dissertation or the production of other output such as an artefact, performance or musical composition. • They include research methods training, which may be provided in a range of different ways (for example, through content modules) 		This course consists of 120 credits of “taught” units and a 60 credit project or dissertation unit. Research methods will be taught thought but especially in the <i>Microbiology & Public Health Research Methods</i> unit.
<p>3.2 Teaching and learning</p> <p>“Teaching and learning methods used in master's degrees are diverse... However, any master's degree may draw upon a combination of methods of delivery as appropriate to the programme's overall aims.”</p>		Teaching and learning methods will vary within and between units. This includes formal lectures, practical classes, e-learning, problem based learning, self-directed study.
<p>3.2 Teaching and learning</p> <p>“All master's degree involve training in research methods.”</p>		Students will receive such training in the <i>Microbiology & Public Health Research Methods</i> unit in addition to exposure to research methods in units throughout the course.

Qualification Characteristic	QAA Master's Degree Characteristics (2015) http://www.qaa.ac.uk/en/Publications/Documents/Masters-Degree-Characteristics-15.pdf	Evidence <i>How the course takes account of relevant qualification characteristics documents</i>
<p>3.3 Assessment</p> <p>“Assessment methods are also diverse and vary significantly depending upon the overall aims of a particular programme. Most master's degrees include a research project, leading to the production of a dissertation or other output, but this is not the case in all master's.”</p>		<p>Assessment methods vary between units to ensure a diversity of assessment. Methods include examinations, poster presentation, oral presentation, literature reviews and formal reports. Students will undertake either a microbiology research project or public health dissertation.</p>

Professional body or other external reference points	<i>(insert title and year)</i>	Evidence <i>How the course takes account of Professional body or other external reference points</i>
Not applicable		