



MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2026-27
Module Code	3466
Module Title	Diagnostic Bacteriology
Module Organiser(s)	Dr Catherine Hall, Dr Vanessa Terra and Dr Victoria Miari
Faculty	Infectious & Tropical Diseases
FHEQ Level	Level 7
Credit Value	CATS: 15 ECTS: 7.5
Term of Delivery	Term 2
Mode of Delivery	For 2026-27 this module will be delivered by predominantly face-to-face teaching modes. Where specific teaching methods (lectures, seminars, discussion groups) are noted in this module specification these will be delivered by predominantly face-to-face sessions. There will be a combination of live and interactive activities (synchronous learning) as well as recorded or self-directed study (asynchronous learning), plus face-to-face laboratory classes.
Mode of Study	Full-time
Language of Study	English
Pre-Requisites	This module is intended for students who have completed Core Bacteriology during Term 1 or have previous practical experience of bacteriology laboratory methods, as this module has a large practical component. Students who have not taken this module should be aware of the large practical component of this module that builds on areas covered during the Core Bacteriology module. Students not on the Medical Microbiology MSc programme are encouraged to contact the MO to discuss the module.
Accreditation by Professional Statutory and Regulatory Body	Not currently accredited by any other body
Module Cap (Indicative number of students)	20 to 24 (numbers may be capped due to limitations in facilities or staffing)



Target Audience	This module is intended for students who wish to understand the principles of clinical diagnosis of bacterial infections, laboratory practice and management and acquire further laboratory competence. This module is intended for students who have completed Core Bacteriology during Term 1 or have previous practical experience of bacteriology laboratory methods, as this module has a large practical component. Students not on the Medical Microbiology MSc programme are encouraged to contact the MOs to discuss the module.
Module Description	The module will provide a practical understanding of how diagnostic techniques are employed and interpreted in healthcare settings to identify bacterial causes of human infections. As well as focusing on specific infections and clinical syndromes, content will also include laboratory processing of different specimen types, identification of significant bacterial colony morphologies and the detection of antimicrobial resistance. Key examples of bacterial infections will be analysed from a variety of specimens (including bloodstream, ear/nose/throat, gastrointestinal, respiratory, wound and genitourinary) to determine the causative agent of infection, in conjunction with clinical presentation and patient histories The module is primarily taught through laboratory sessions with corresponding lectures, providing comprehensive explanation and practical experience of the techniques used to identify different bacterial pathogens.
Duration	5 weeks at 2.5 days per week
Timetabling slot	Slot C2
Last Revised (e.g. year changes approved)	May 2024

Programme(s)	Status
This module is linked to the following programme(s)	
MSc Medical Microbiology	Recommended
MSc Control of Infectious Diseases	Recommended
MSc Tropical Medicine and International Health	Recommended

Module Aim and Intended Learning Outcomes

Overall aim of the module

The overall module aim is to:

- provide instruction in the aetiology, clinical presentation, diagnosis and management of human bacterial infections of clinical importance.

Module Intended Learning Outcomes

Upon successful completion of the module a student will be able to:

1. Apply understanding of essential theory and practice of bacteriology to the diagnosis and treatment of bacterial infections.
2. Appraise the utility of diagnostic procedures in the context of different bacterial infections or diagnostic settings.
3. Investigate causes of bacterial infections by performing various clinical laboratory procedures including specimen processing, isolation, identification and susceptibility testing of bacterial pathogens.
4. Critically evaluate the purpose and use of standard operating procedures, laboratory validation and syndromic management for the diagnosis of bacterial infections.

Indicative Syllabus

Session Content

The module is expected to cover the following topics:

- Infectious bacterial diseases;
- Laboratory investigations necessary for the diagnosis and treatment of the infected individual;
- Processing of clinical specimens, including isolation, identification and susceptibility testing of bacterial pathogens.

Teaching and Learning

Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	52	34.7
Directed self-study	0	0
Self-directed learning	48	32
Assessment, review and revision	50	33.3
Total	150	100

Student contact time refers to the tutor-mediated time allocated to teaching, provision of guidance and feedback to students. This time includes activities that take place in face-to-face contexts such as lectures, seminars, demonstrations, tutorials, supervised laboratory workshops, practical classes, project supervision as well as where tutors are available for one-to-one discussions and interaction by email.

The division of notional learning hours listed above is indicative and is designed to inform students as to the relative split between interactive and self-directed study.

Teaching and Learning Strategy

The module consists of a blend of online or face-to-face lectures and on-campus practical sessions. The practical focus is of particular importance.

Assessment

Assessment Strategy

The assessment for this module has been designed to measure student learning against the module intended learning outcomes (ILOs) as listed above. Formative assessment methods may be used to measure students' progress. The grade for summative assessment(s) only will go towards the overall award GPA.

The assessment for this module will be on-campus at LSHTM.

Students will sit weekly 60 minute MCQs (50%) covering each week's content derived from laboratory and lecture sessions. The overall grade from the MCQs will be calculated based on three out of four of the MCQ assessments, the assessment with the lowest mark will be omitted from the calculation. Students will also complete a piece of coursework (50%) across the course of the module which will require incorporation, reworking and application of learning from across the module e.g. development of a laboratory test for the detection of AMR.

Summative Assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Timed MCQs (x4)	60 minutes, 30 questions each	50	1, 2, 3, 4
Coursework	2000 words	50	1, 2, 3, 4

Resitting assessment

Resits will accord with [Chapter 8a](#) of the LSHTM Academic Manual

For individual students resitting there will be an approved alternative assessment as detailed below.

Assessment being replaced	Approved Alternative Assessment Type	Approved Alternative Assessment Length (i.e. Word Count, Length of presentation in minutes)
Timed MCQs	Coursework	The task will be a coursework assessment consisting of four short essay questions.

Resources

Other resources

<https://www.gov.uk/government/collections/standards-for-microbiology-investigations-smi>



Teaching for Disabilities and Learning Differences

The module-specific site on Moodle gives students access to lecture notes and copies of the slides used during the lecture. Where appropriate, lectures are recorded and made available on Moodle. All materials posted on Moodle, including computer-based sessions, have been made accessible where possible.

LSHTM Moodle is accessible to the widest possible audience, regardless of specific needs or disabilities. More detail can be found in the [Moodle Accessibility Statement](#) which can also be found within the footer of the Moodle pages. All students have access to "SensusAccess" software which allows conversion of files into alternative formats.

Student Support Services can arrange learning or assessment adjustments for students where needed. Details and how to request support can be found on the [LSHTM Disability Support pages](#).