



**UNIVERSITY
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SCHOOL of
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MEDICINE



MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2020-21
Module Code	IDM103
Module Title	Biology of Infectious Diseases
Module Organiser(s)	Anita Skinner & Kevin Tetteh
Contact email	The LSHTM distance learning programmes and modules are run in collaboration with the University of London Worldwide. Enquiries may be made via the Student Advice Centre . (Enquiries from face-to-face i.e. London-based the LSHTM MSc or research students regarding study of DL modules should be emailed to distance@lshtm.ac.uk .)
Faculty	Infectious & Tropical Diseases: The London School of Hygiene & Tropical Medicine https://www.lshtm.ac.uk/research/faculties/itd
FHEQ Level	Level 7
Credit Value	CATS: 15 ECTS: 7.5
HECoS Code	100353
Mode of Delivery	Distance Learning
Mode of Study	Directed self-study, through provided and online materials
Language of Study	English
Pre-Requisites	None
Accreditation by Professional Statutory and Regulatory Body	None
Module Cap (Maximum number of students)	None
Target Audience	This module is intended for all those with an interest in infectious diseases particularly scientists wishing to expand their knowledge of infectious diseases and clinicians and other health workers wishing to expand their knowledge of the biological aspects of infectious diseases.
Module Description	This module forms part of the core elements for the Infectious Diseases MSc, PGDip and PGCert Programme. It builds on the Principles of Biology module and introduces students to pathogens, specifically how they interact with the human host to cause infection and disease. Students are also

	introduced to the concept of how knowledge of the biology can be used to avoid infection and reduce the global burden of communicable diseases.
Duration	Distance learning module studies begin in early October. Students may start their studies at any time from receipt of study materials and work through the material until the start of the June examinations (although assessment submission deadlines which are earlier than this must be observed).
Last Revised (e.g. year changes approved)	April/2020

Programme(s)	Status
This module is linked to the following programme(s)	
PGCert/PGDip/MSc Infectious Diseases (Distance Learning - University of London Worldwide)	Compulsory

Module Aim and Intended Learning Outcomes

Overall aim of the module
<p>The overall module aim is to:</p> <ul style="list-style-type: none"> introduce students to the way pathogens (viruses, bacteria, fungi, protozoa, helminths) invade, establish infection, cause disease and evade the immune response in the human host.

Module Intended Learning Outcomes
<p>Upon successful completion of the module a student will be able to:</p> <ol style="list-style-type: none"> Distinguish between the different relationships that exist between pathogens and their human hosts. Give examples of pathogens (viruses, bacteria, fungi, protozoa and helminths) that cause the most important communicable diseases in humans. Explaining how the host responds to infections and how pathogens cause disease. Discuss the concept of vectors with particular reference to insects and acarines, including examples of transmitted pathogens. Assess how knowledge of the relationship between pathogens, vectors and their hosts can be used to reduce the global burden of communicable diseases.



Indicative Syllabus

Session Content

The module is expected to cover the following topics:

- **Section 1**
This consists of a single introductory session that sets the scene for what is to come and describes some of the important concepts that students will need to know about, such as the nature of parasitism.
- **Section 2**
The largest section consisting of seven sessions, which first introduce students to the major groups of pathogens and describe what infectious diseases are. Then the viruses, bacteria, fungi, protozoa, helminth worms and arthropods, responsible for the most important infectious diseases, are considered in a bit more detail.
- **Section 3**
Describes how infectious organisms enter their hosts, locate their final position within the host and spread throughout the body.
- **Section 4**
Looks at the relationships that exist between pathogens and their hosts, the ways in which infectious organisms evade the host's immune responses and the pathology and immunopathology of infectious diseases.
- **Section 5**
Presents a number of case studies that take students from the theoretical aspects of the earlier material into the real world of clinical disease.

Teaching and Learning

Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Directed self-study	75	50
Self-directed learning	50	33
Assessment, review and revision	25	17
Total	150	100

Teaching and Learning Strategy

Learning is self-directed against a detailed set of learning objectives using the materials provided. Students are strongly encouraged to participate in the module-specific discussion forums available on Moodle to obtain tutor support, and to make use of the LSHTM online library resources. To encourage the development of information skills and critical analysis of articles, journal club activities are facilitated by a tutor. Optional formative assignments

Teaching and Learning Strategy

are available to help students practice some of the principles discussed, and obtain tutor feedback. Assignments for this module can be submitted only once annually, no later than 31st March and must be submitted via the online Assignment Management System.

Assessment

Assessment Strategy

Formal assessment of this module includes a two-hour unseen written paper examination with 15 minutes additional reading/planning time (100%).

The unseen written exam format fulfils two important roles. Firstly, proving that the correct student is sitting the exam. It is important for the currency of the qualification than some modules are assessed by exam. Secondly, this module covers a wide range of pathogens and infection models. The exam format retains the possibility that students can be asked to compare or contrast the range of pathogens that are covered in the syllabus, confirming the need for students to understand the relationships between pathogen, host and the environment for a wide range of infections and to be able to demonstrate this understanding in the exam.

Summative assessment

Assessment Type	Assessment Length	Weighting (%)	Intended Module Learning Outcomes Tested
Exam	2 hours 15 minutes	100	1 - 4

Unseen written examinations for DL modules are held once a year, in June (including resits). Examinations are normally held in a student's country of residence, in one of over 650 examination centres worldwide. They are arranged mainly through Ministries of Education or the British Council. A list of examination centres can be found at <https://london.ac.uk/current-students/examinations/examination-centres>.

A local fee will be payable direct to the examination centre. This fee is in addition to the programme/module fee and is set by, and paid directly to, the individual examination centres. The level of local examination centre fees varies across the world and neither the University of London nor the LSHTM have any control over the fee amount.



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Resitting assessment

Resits will accord with the LSHTM's [Resits Policy](#).

The Resit assessment will be the same assessment type as the first attempt (see previous table).

Resources

Indicative reading list

- Goering, R.V., Dockrell, H.M., Zuckerman, M. and Chiodini, P.L., (2018) *Mims' Medical Microbiology and Immunology*. 6th Ed. ISBN: 978-0702071560.
- Service, M., (2012) *Medical Entomology for Students*. 5th Ed. Cambridge University Press. ISBN: 978-1107668188.
- Cheesbrough, M., (2016) *Tropical Medicine Microscopy*, Tropical Health Technology.

Other resources

Study Guide: Available online, and to download, via the virtual learning environment

Leganto Reading List: online reading list available via the virtual learning environment

In addition to the materials above, students are given access to the **LSHTM Virtual Learning Environment, Moodle** where they can access the study guide, reading list, web-based discussion forums, formative assignments, supplementary materials and the **LSHTM online library resources**.



Teaching for Disabilities and Learning Differences

The module-specific site on Moodle provides students with access to the module learning materials, including a study guide (in accessible PDF format) and online reading list (Leganto - containing both essential readings, and textbooks if available), and additional resources including supplementary Journal club and library based exercises and optional threshold concept recordings. All materials posted up on Moodle areas, including computer-based sessions, have been made accessible where possible. The LSHTM Moodle has been made accessible to the widest possible audience, using a VLE that allows for up to 300% zoom, permits navigation via keyboard and use of speech recognition software, and that allows listening through a screen reader. All students have access to "[SensusAccess](#)" software which allows conversion of files into alternative formats.

If you have specific, access requirements please contact the Inclusive Practice Manager via special.arrangements@london.ac.uk to request an alternative format of the study guide and for special exam arrangements.