



MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2022-23
Module Code	IDM502
Module Title	Tuberculosis
Module Organiser(s)	Dr Sarah Prentice
Contact email	The LSHTM distance learning programmes and modules are run in collaboration with 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	100265:101317 (1:1)
Mode of Delivery	Distance Learning
Mode of Study	Directed self-study, through provided and online materials
Language of Study	English
Pre-Requisites	Those who wish to study this module as an individual module or as part of another programme should have a prior knowledge of basic biochemistry, cell biology, genetics and immunology in order to be able to work through and benefit fully from this module.
Accreditation by Professional Statutory and Regulatory Body	None
Module Cap (Maximum number of students)	None
Target Audience	This module is suitable for a wide audience, including biologists interested in the host-pathogen interaction in tuberculosis, clinical and non-clinical staff who are involved in TB control programs, and those involved in policy-making.

Module Description	This module equips students with the skills needed to understand important aspects of the biology, sociology, clinical and public health of tuberculosis. It is aimed at students who wish to acquire further skills relevant to the control of tuberculosis as a public health challenge. The student's broader understanding of tuberculosis is assessed through an assessed assignment and a written examination of selected areas from within the module.
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 2022

Programme(s)	Status
This module is linked to the following programme(s)	
PGDip/MSc Infectious Diseases (Distance Learning - University of London Worldwide)	Elective Option
PGDip/MSc Clinical Trials (Distance Learning - University of London Worldwide)	Elective Option
PGDip/MSc Epidemiology (Distance Learning - University of London Worldwide)	Elective Option
PGDip/MSc Global Health Policy (Distance Learning - University of London Worldwide)	Elective Option
PGDip Public Health (Distance Learning - University of London Worldwide)	Elective Option
MSc Public Health (General Stream) (Distance Learning - University of London Worldwide)	Elective Option
MSc Public Health: Environment and Health (Distance Learning - University of London Worldwide)	Elective Option
MSc Public Health: Health and Promotion (Distance Learning - University of London Worldwide)	Elective Option
MSc Public Health: Health Services Management (Distance Learning - University of London Worldwide)	Elective Option

Module Aim and Intended Learning Outcomes

Overall aim of the module

The overall module aim is to:

- give students a broad understanding of TB, with an emphasis on the biology and pathology of tuberculosis, and how modern techniques of molecular biology and immunology can be harnessed to combat this infection.

Module Intended Learning Outcomes

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

1. explain the biology of the tubercle bacillus and its interaction with its human host,
2. describe the clinical features of tuberculosis, including its clinical manifestations, diagnosis and treatment among adults and children and including the effects of HIV,
3. analyse the current approaches to tuberculosis control,
4. evaluate the broader biological, social and ethical issues that relate to tuberculosis and measures to end tuberculosis as a public health problem.

Indicative Syllabus

Session Content

The module is expected to cover the following topics:

- An introduction, detailing the history, current epidemiology, natural history and clinical presentation of tuberculosis.
- **Biology**
This section discusses the basic biology of the causative agent, *M. tuberculosis*, including how distinct strains can be identified by their genomic sequence, and how the pathogen interacts with the host immune system.
- **Diagnosis**
This section discusses the methodology underlying the main tests available to diagnose tuberculosis disease and also infection with *M. tuberculosis*. It then covers how these tests are employed in clinical practice.
- **Treatment**
The mechanisms of action of the main first-line antibiotics are described, alongside the molecular mutations underlying drug resistance. The use of multi-drug treatment regimens to treat drug sensitive and drug-resistant TB is explained, including in children and in people living with HIV.
- **Vaccination**
This short section covers the BCG vaccine, how it was derived and how widely it is used today, and explains the limitations of its efficacy and why TB is still a major health problem.

Session Content

- **Global Epidemiology of TB**

This substantial section covers current global epidemiology, including social epidemiology and social determinants including the impact of HIV, poverty, and epidemiology of Multi Drug Resistance (MDR).

- **Ending the TB epidemic**

The broader context of the global policies to end TB are examined, explaining why an understanding of the social and ethical challenges people with TB (or HIV-TB) face is vital alongside a biomedical approach **Research Priorities**

This final section addresses the need for new tools if TB is going to be fully controlled, and highlights current avenues of research.

Teaching and Learning

Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Directed self-study	75	50
Self-directed learning	25	17
Assessment, review and revision	50	33
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. In addition, written feedback is provided on submitted assignments.

Assessment

Assessment Strategy

Formal assessment of this module includes a two-hour unseen written paper examination with 15 minutes additional reading/planning time (70%) and an assessed assignment comprising a 2500-word report (30%).

The assessments are designed to cover a broad range of the material from the different sections. It does however allow students to choose to focus on particular areas of interest.

Assessment submission deadlines

Assessed Assignment submission deadline **31st March**

Exam takes place in **June**

Summative assessment

Assessment Type	Assessment Length	Weighting (%)	Intended Module Learning Outcomes Tested
Assessed Assignment	2500 words	30	1 - 4
Exam	2 hours 15 minutes	70	1 - 4

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.

Unseen written examinations for DL modules are held once a year, in **June** (including resits).

Exams will be held in accordance with annual UoL guidance. They will be conducted in the same format for all students either online or in international exam centres.

There are 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.

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

- *Essential Tuberculosis*. (2021) Giovanni Battista Migliori and Mario C. Raviglione (eds)
ISBN: 9783030667030

Textbooks will be made available in e-format to registered students in early autumn.

Other resources

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

Reader: 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; VLE; Moodle** where they can access the study guide, reading list, web-based discussion forums, assignments, supplementary materials, activities 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 (with accessible printable versions of sessions) and online reading list (containing essential readings, and textbooks if available), and additional resources including supplementary exercises. 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.