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## MODULE SPECIFICATION

<b>Academic Year (student cohort covered by specification)</b>	2020-21
<b>Module Code</b>	IDM502
<b>Module Title</b>	Tuberculosis
<b>Module Organiser(s)</b>	Peter Godfrey-Faussett
<b>Contact email</b>	The LSHTM distance learning programmes and modules are run in collaboration with University of London Worldwide. Enquiries may be made via <a href="#">the Student Advice Centre</a> . (Enquiries from face-to-face i.e. London-based the LSHTM MSc or research students regarding study of DL modules should be emailed to <a href="mailto:distance@lshtm.ac.uk">distance@lshtm.ac.uk</a> .)
<b>Faculty</b>	Infectious & Tropical Diseases: The London School of Hygiene & Tropical Medicine <a href="https://www.lshtm.ac.uk/research/faculties/itd">https://www.lshtm.ac.uk/research/faculties/itd</a>
<b>FHEQ Level</b>	Level 7
<b>Credit Value</b>	<b>CATS:</b> 15 <b>ECTS:</b> 7.5
<b>HECoS Code</b>	100265:101317 (1:1)
<b>Mode of Delivery</b>	Distance Learning
<b>Mode of Study</b>	Directed self-study, through provided and online materials
<b>Language of Study</b>	English
<b>Pre-Requisites</b>	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.
<b>Accreditation by Professional Statutory and Regulatory Body</b>	None
<b>Module Cap (Maximum number of students)</b>	None
<b>Target Audience</b>	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.
<b>Module Description</b>	This module equips students with the skills needed to understand important aspects of the biology, sociology,



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	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.
<b>Duration</b>	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).
<b>Last Revised (e.g. year changes approved)</b>	May/2020

<b>Programme(s)</b>	<b>Status</b>
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



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## Module Aim and Intended Learning Outcomes

### Overall aim of the module

The overall module aim is to:

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

### 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 for its control.

## 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

- **TB epidemiology and control**

This substantial section covers current global epidemiology, including the impact of HIV and drug resistance on control efforts. It examines how public health TB control measures have evolved, why success has been limited, and introduces more recent WHO strategies.

- **Social and Ethical challenges**

The broader context of TB control is examined, explaining why an understanding of the economic and social challenges people with TB (or HIV-TB) face is vital alongside a biomedical approach to TB control.

- **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
<b>Total</b>	<b>150</b>	<b>100</b>

### 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.



## 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 31<sup>st</sup> 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). 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.

### 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).



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## Resources

### Indicative reading list

- WHO, (2004). *TB/HIV, A Clinical Manual*. 2<sup>nd</sup> Ed. World Health Organisation. ISBN: 978-9241546348.
- *Treatment of Tuberculosis, Guidelines For National Programmes*. World Health Organisation, (1997). ISBN: 978-0119517767.4th Ed.

### Other resources

**Study Guide:** interactive CD-ROM.

**Reader:** Reprints of associated journal articles.

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, 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](mailto:special.arrangements@london.ac.uk) to request an alternative format of the study guide and for special exam arrangements.