## Module Specification

### GENERAL INFORMATION

<table>
<thead>
<tr>
<th>Module name</th>
<th>Viral Infections</th>
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<tbody>
<tr>
<td>Module code</td>
<td>IDM204</td>
</tr>
<tr>
<td>Module Organiser(s)</td>
<td>Dr Michael Gaunt</td>
</tr>
<tr>
<td>Contact email</td>
<td>The LSHTM distance learning programmes and modules are run in collaboration with the University of London. Enquiries may be made via their Student Advice Centre at: <a href="https://london.ac.uk/contact-us">https://london.ac.uk/contact-us</a> (Enquiries from face-to-face i.e. London-based 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>.)</td>
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<tr>
<td>Home Faculty</td>
<td>Faculty of Infectious &amp; Tropical Diseases</td>
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<td></td>
<td>London School of Hygiene &amp; Tropical Medicine</td>
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<td></td>
<td><a href="https://www.lshtm.ac.uk/research/faculties/itd/">https://www.lshtm.ac.uk/research/faculties/itd/</a></td>
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<tr>
<td>Level</td>
<td>This module is at Level 7 (postgraduate Masters ‘M’ level) of the QAA Framework for Higher Education Qualifications in England, Wales &amp; Northern Ireland (FHEQ)</td>
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<tr>
<td>Credit</td>
<td>LSHTM award 15 credits on successful completion of this module</td>
</tr>
<tr>
<td>Accreditation</td>
<td>Not currently accredited by any other body</td>
</tr>
<tr>
<td>Keywords</td>
<td>Classification of viruses, virus replication, pathology of virus infection, prevention, antiviral treatments, vaccines.</td>
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### AIMS, OBJECTIVES AND AUDIENCE

**Overall aim**
This module aims to undertake a systematic overview of the important current and emerging viruses causing infections in humans. Students will explore the molecular biology of the different types of viruses, the different strategies that are involved in their replication and how they cause disease. Consideration is given to the prevention, treatment and control of virus infections. Prior knowledge of basic biochemistry, cell biology, genetics and immunology from core modules or elsewhere is expected.

**Intended learning outcomes**
By the end of this module, students should be able to:
- Distinguish the different classes of viruses on the basis on their genome and identify the main features of each virus.
- Describe the mechanisms used by viruses to infect the cells and discuss clearly each step of virus replication.
- Discuss the pathological aspects of virus infection related to specific virus families.
- Recognise the role and the impact that some viruses have on public health.
- Discuss the different approaches used for the prevention and treatment of viral infection including vaccines and antiviral chemotherapies.
<table>
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<tr>
<th>Target audience</th>
<th>This module is intended for those who wish to understand the principles of virology, the role of viruses in important human diseases and the possible ways to prevent their dissemination.</th>
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</table>
| CONTENT         | The module includes sections addressing the following topics:  
| Section 1 Introduction to viruses | Section 1 provides the scientific background essential for the understanding of the biology of viruses. It is aimed at students who have a command of cell biology, molecular biology and basic immunology. Supplementary reading is provided for those without the necessary background. The biology of viruses is set in the context of their interactions with humans both as individuals and populations. In this section students will also receive basic information regarding virus classification and different aspects of their life cycle. Important issues such as cancer development and host resistance are also discussed.  
| Section 2 Pathogenic viruses | Section 2 describes the biology of individual viruses, both endemic and emergent, and the diseases they cause. Where the information is available, an indication is given as to numbers of people infected. The organization of this module reflects current understanding of viruses and the way in which they are studied. Their importance as pathogens is indicated but there is no direct link between the extent of the knowledge about a virus and its significance as a pathogen. The ability to investigate a virus is limited by technical considerations. |
| TEACHING, LEARNING AND ASSESSMENT | The following materials are provided to students after registration for this module once a year in September:  
| Reader (folder containing associated journal articles).  
| Textbooks: | The following materials are provided to students after registration for this module once a year in September:  
| In addition to the materials above, students are given access to the LSHTM Virtual Learning Environment, Moodle (for web-based discussion forums etc.) and the LSHTM online library resources. Audio-recordings of on-campus lectures are not available for this module.  
| Teaching and learning methods | 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 LSHTM online library resources. In addition, written feedback is provided on submitted assignments. |
| Assessment details | 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 essay on a choice of two topics (30%).  
If students fail the module overall, they are allowed one further attempt at the failed element (examination and/or assignment). |
### Assessment dates

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).

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](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.

### Language of study and assessment

English (please see 'English language requirements' below regarding the standard required for entry).

### TIMING AND MODE OF STUDY

**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).

**Dates**

Tutorial support for distance learning modules is available from the beginning of October through to the end of May.

**Mode of Study**

By distance learning.

**Learning time**

The notional learning time for the module totals 150 hours, consisting of:

- Directed self-study (reading and working through the provided module material) ≈ 75 hours
- Self-directed learning (general reading around the subject, library, Moodle discussion forums) ≈ 25 hours
- Assessment, review and revision ≈ 50 hours

### APPLICATION, ADMISSION AND FEES

**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 basic immunology in order to be able to work through and benefit fully from this module.

Those wishing to study this module must have regular access to the internet to participate in module-specific discussions on Moodle, benefit from online library facilities and submit assignments.

**English language requirements**

A strong command of the English language is necessary to benefit from studying the module. Applicants whose first language is not English or whose prior university studies have not been conducted wholly in English must fulfil LSHTM’s English language requirements, with an acceptable score in an approved test taken in the two years prior to entry. Applicants may be asked to take a test even if the standard conditions have been met.
Student numbers
There is no cap on the number of students who can register for this distance learning module. The number of students actively studying this module varies, but typically approx. 35 students register for the module per year.

Student selection
This module is available to be studied by students on the following distance learning programmes:
MSc or PG Dip Infectious Diseases (ID) or Clinical Trials (CT) programmes.
Alternatively, students may register for this as an “individual module”.
This module is also open to students registered on LSHTM face-to-face (i.e. London-based) MSc programmes (subject to programme-specific limitations) and research degree students.

Fees
For the current schedule of fees click on the LSHTM course link.

Scholarships
Scholarships are not available for individual modules. Some potential sources of funding are detailed on the LSHTM website.

Admission deadlines
Applications for LSHTM distance learning programmes and modules are managed by the University of London. To apply to take either a formal award (i.e. PG Certificate, PG Diploma or MSc) or an individual module, click on the relevant link on the right hand side of the page at https://london.ac.uk/courses/infectious-diseases
Key deadlines are as follows:
• If taken as part of a formal award (i.e. PG Certificate, PG Diploma or MSc):
  ➢ Application deadline: 31 August each year
  ➢ Registration deadline: 30 September each year (continuing students may register until 31 October but are strongly recommended to register before this deadline because the study year starts beginning of October)
• If taken as an individual module:
  ➢ Application deadline: 31 August each year
  ➢ Registration deadline: 31 October each year
(LSHTM research students wishing to study this module should note information given in the mixed mode study option document.)

ABOUT THIS DOCUMENT
This module specification applies for the academic year 2019/20.
Last revised/approved, by M Bridge 05/02/19
Further revisions revised
London School of Hygiene & Tropical Medicine, Keppel St., London WC1E 7HT.  www.lshtm.ac.uk