



## MODULE SPECIFICATION

<b>Academic Year (student cohort covered by specification)</b>	2023-24
<b>Module Code</b>	3120
<b>Module Title</b>	Immunology of Infectious Diseases
<b>Module Organiser(s)</b>	Dr Helena Helmbly
<b>Faculty</b>	Infectious & Tropical Diseases
<b>FHEQ Level</b>	Level 7
<b>Credit Value</b>	<b>CATS:</b> 50 <b>ECTS:</b> 25
<b>HECoS Code</b>	100265:100345 (1:1)
<b>Term of Delivery</b>	Term 1
<b>Mode of Delivery</b>	For 2023-24 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.
<b>Mode of Study</b>	Full-time
<b>Language of Study</b>	English
<b>Pre-Requisites</b>	None
<b>Accreditation by Professional Statutory and Regulatory Body</b>	None
<b>Module Cap (Indicative number of students)</b>	Approximately 20 (numbers may be capped due to limitations in facilities or staffing)
<b>Target Audience</b>	Immunology of Infectious Diseases is intended for life science and medical graduates intending to work in the fields of general medicine, vaccinology or immunology, For most students, the theoretical part of the module will update and extend their knowledge from their first degree.
<b>Module Description</b>	This module provides an overview of the immune system and its response to infection. It covers all major subject areas within this theme and prepares students for later immunology-based modules in Terms 2 and 3. The module

	will also provide a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge.
<b>Duration</b>	10 weeks at 4 days per week
<b>Timetabling slot</b>	Term 1
<b>Last Revised (e.g. year changes approved)</b>	June 2023

<b>Programme(s)</b>	<b>Status</b>
This module is linked to the following programme(s)	
MSc Immunology of Infectious Diseases	Compulsory

## Module Aim and Intended Learning Outcomes

<b>Overall aim of the module</b>
<p>The overall module aim is to:</p> <ul style="list-style-type: none"> <li>provide a foundation of current immunology knowledge in the context of infectious diseases, incorporating practical immunological laboratory skills and data interpretation skills.</li> </ul>

<b>Module Intended Learning Outcomes</b>
<p>By the end of this module, students will be able to:</p> <ol style="list-style-type: none"> <li>Describe in detail the features and functions of the immune system with reference to contemporary research;</li> <li>Explain in detail the differences between the important immunological features relating to the major infectious diseases;</li> <li>Summarise the latest research in principles and applications of vaccinology;</li> <li>Integrate knowledge of experimental principles underlying commonly used immunological techniques in order to design and evaluate immunological research;</li> <li>Interpret and evaluate primary scientific data and communicate them in a clear and concise manner.</li> </ol>

## Indicative Syllabus

### Session Content

The module is expected to cover the following topics:

- Innate immunity mechanisms
- The lymphoid system
- Cells of the immune response
- Leucocyte migration
- Phagocytes
- Antibody structure and function; B cell biology
- The major histo-compatibility complex
- Antigen processing and presentation
- T-cell receptors and activation
- Cytokines
- Cell cooperation
- Cytotoxicity
- Inflammation
- Hypersensitivity
- Immunodeficiency
- Immunogenetics
- Mucosal immunity
- Immune responses to infections
- Vaccines

## Teaching and Learning

### Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	<b>201</b>	<b>40.2</b>
Directed self-study	<b>200</b>	<b>40</b>
Self-directed learning	<b>49</b>	<b>9.8</b>
Assessment, review and revision	<b>50</b>	<b>10</b>
<b>Total</b>	<b>500</b>	<b>100</b>

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

Teaching will consist of formal lectures, group learning/review sessions and tutorials, which will be complemented by hands-on practical exercises in the laboratory. Time for private study will be allocated in the timetable.

## 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 summative assessment will be by

- i) An online MCQ assessment held during reading week (30% of Module GPA) and,
- ii) An unseen timed written test held during the week before the start of Term 2 (70% of Module GPA)

The MCQ assessment will be online.

The unseen timed written test will take place in a class room.

### Summative Assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
MCQ	1 hour	30	1
Unseen Timed Written Test	3 hours	70	1-5

### Resitting assessment

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

The MCQ Resit assessment will be a short answer online assessment (see previous table). The Written Assessment Resit will be the same assessment type as the first attempt (see previous table).



## Resources

### **Indicative reading list**

Course materials and lecture notes will be provided via the LSHTM Virtual Learning Environment, Moodle.

**Recommended:** we recommend that students have access to one of the following general Immunology textbooks:

1. Janeway's Immunobiology ISBN-10: 0393884910, ISBN-13: 978-0815345510 (Norton & Company)
2. Roitt's Essential Immunology ISBN: 978-1-118-41577-1 (Wiley-Blackwell)
3. Abbas Cellular and Molecular Immunology, ISBN-10: 9780323479783, ISBN-13: 978-0323479783 (Elsevier)

### **Other resources**

Students are given access to the LSHTM Virtual Learning Environment, (Moodle) where they can access web-based discussion forums, assignments (where applicable), supplementary materials, Panopto recordings and the LSHTM online library resources.

## Teaching for Disabilities and Learning Differences

The module-specific site on Moodle provides students with access to lecture notes and copies of the slides used during the lecture prior to the lecture (in pdf format). All lectures are recorded and made available on Moodle as quickly as possible. 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.

For students who require learning or assessment adjustments and support this can be arranged through the Student Support Services – details and how to request support can be found on the [LSHTM Disability Support pages](#).