



<h1>Module Specification</h1>	 <p><b>UNIVERSITY OF LONDON</b> INTERNATIONAL PROGRAMMES</p>	<p>LONDON SCHOOL of HYGIENE &amp; TROPICAL MEDICINE</p> 
<h2>GENERAL INFORMATION</h2>		
<b>Module name</b>	<b>Immunology of Infection and Vaccines</b>	
<b>Module code</b>	IDM213	
<b>Module Organiser(s)</b>	Dr John Raynes	
<b>Contact email</b>	<p>The LSHTM distance learning courses and modules are run in collaboration with the University of London International Programmes. Enquiries may be made via their Student Advice Centre at:  <a href="http://www.londoninternational.ac.uk/contact-us">http://www.londoninternational.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>.)</p>	
<b>Home Faculty</b>	<p>Faculty of Infectious &amp; Tropical Diseases          London School of Hygiene &amp; Tropical Medicine  <a href="http://www.lshtm.ac.uk/itd/">http://www.lshtm.ac.uk/itd/</a></p>	
<b>Level</b>	<p>This module is at Level 7 (postgraduate Masters 'M' level) of the QAA <a href="#">Framework for Higher Education Qualifications</a> in England, Wales &amp; Northern Ireland (FHEQ)</p>	
<b>Credit</b>	LSHTM award 15 credits on successful completion of this module	
<b>Accreditation</b>	Not currently accredited by any other body	
<b>Keywords</b>	Immunology, immunity, vaccines, pathogens, infections, research methodology	
<h2>AIMS, OBJECTIVES AND AUDIENCE</h2>		
<b>Overall aim</b>	<p>This module aims to provide an overview of modern molecular immunology methods and immunity to infection. Although not all aspects of immunology can be covered in depth, more detailed insight will be provided into selected aspects of current research of particular relevance to vaccine design.</p>	
<b>Intended learning outcomes</b>	<p>By the end of this module, students should be able to:</p> <ul style="list-style-type: none"> <li>• describe the main immunological responses responsible for immunity to the selected pathogens and how these influence vaccine design,</li> <li>• discuss evasion strategies of pathogens and problems they cause for vaccine design,</li> <li>• understand the principles and uses of a range of immunological techniques in current use,</li> <li>• read a scientific paper on the immunology of infection and understand how the findings support or contradict previously held theories.</li> </ul>	
<b>Target audience</b>	<p>This module is intended for those who wish to understand the immune response to infection and vaccines.</p>	

CONTENT	
<b>Session content</b>	<p>The module includes 4 sections addressing the following topics:</p> <p><b>Section 1</b>     <i>The immune system and vaccine design</i>  This section aims to provide a basic understanding of immunology. The sessions cover innate immunity, acquired immunity, the various forms of immunodeficiency that affect these immune systems and then a consideration of vaccines and how they work.</p> <p><b>Section 2</b>     <i>Immunity to infection and vaccines</i>  These sessions are arranged in four blocks each deal with the immunology of particular bacterial, fungal, viral, and parasitic infections.</p> <p><b>Section 3</b>     <i>Methodology</i>  This section contains three sessions on some really important methods which are central to the investigation of immune responses.</p> <p><b>Section 4</b>     <i>Journal studies</i>  Three research papers have been chosen for students to interpret, where each paper deals with one of the infections covered in Section 2.</p> <p>Section 2 is the core component of the course with section 1 providing an introduction where needed to the immune response. Sections 3 and 4 are then additional components that provide more insight into the practical aspects of immunology research.</p>
TEACHING, LEARNING AND ASSESSMENT	
<b>Study resources provided or required</b>	<p>The following materials are provided to students registered for this module:</p> <p><b>Study Guide:</b> Paper version.</p> <p><b>Reader:</b> Reprints containing associated journal articles</p> <p><b>Textbook:</b></p> <ul style="list-style-type: none"> <li>• Playfair, J., &amp; Bancroft, G., (2013). <i>Infection &amp; Immunity</i>. 4th Ed. Oxford University Press. ISBN: 9780199609505.</li> </ul> <p>In addition to the materials above, students are given access to the LSHTM <b>Virtual Learning Environment, Moodle</b> (for web-based discussion forums etc.) and the LSHTM <b>online library resources</b>.</p> <p>Audio-recordings of on-campus lectures are not available for this module.</p>
<b>Teaching and learning methods</b>	<p>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.</p>
<b>Assessment details</b>	<p>Formal assessment of this module concentrates on section 2 and 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 (30%).</p> <p>If students fail the module overall, they are allowed one further attempt at the failed element (examination and/or assignment).</p>
<b>Assessment dates</b>	<p>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.</p> <p>Unseen written examinations for DL modules are held once a year, in June (including resits).</p>

	<p>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 <a href="http://www.londoninternational.ac.uk/community-support-resources/current-students/examinations/examination-centres">http://www.londoninternational.ac.uk/community-support-resources/current-students/examinations/examination-centres</a>.</p> <p>A local fee will be payable direct to the examination centre. This fee is in addition to the course/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 International Programmes nor the LSHTM have any control over the fee amount.</p>
<b>Language of study and assessment</b>	English (please see 'English language requirements' below regarding the standard required for entry).
<b>TIMING AND MODE OF STUDY</b>	
<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 should be observed).
<b>Dates</b>	Tutorial support for distance learning modules is available from the beginning of October through to the end of May.
<b>Mode of Study</b>	By distance learning.
<b>Learning time</b>	<p>The notional learning time for the module totals 150 hours, consisting of:</p> <ul style="list-style-type: none"> <li>• Directed self-study (reading and working through the provided module material) ≈ 80 hours</li> <li>• Self-directed learning (general reading around the subject, library, Moodle discussion forums ) ≈ 20 hours</li> <li>• Assessment, review and revision ≈ 50 hours</li> </ul>
<b>APPLICATION, ADMISSION AND FEES</b>	
<b>Pre-requisites</b>	<p>Those who wish to study this module as an individual module or as part of another course should have <b>a prior knowledge of basic biochemistry, cell biology, genetics, immunology and microbiology in order to be able to work through and benefit fully from this module.</b></p> <p>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.</p>
<b>English language requirements</b>	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 <a href="#">English language requirements</a> , 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.
<b>Student numbers</b>	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. 50 students register for the module per year.
<b>Student selection</b>	This module is available to be studied by students on the following distance learning courses:

	<p>MSc or PG Diploma Infectious Diseases (ID), Clinical Trials (CT), Public Health (PH), Global Health Policy (GHP) or MSc Epidemiology (EP).</p> <p>Alternatively, students may register for this as an “individual module”.</p> <p>This module is also open to students registered on LSHTM face-to-face (i.e. London-based) MSc courses (subject to course-specific limitations) and research degree students.</p>
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<b>Fees</b>	For the current <a href="#">schedule of fees</a> click on the LSHTM course link.
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<b>Scholarships</b>	Scholarships are not available for individual modules. Some potential <a href="#">sources of funding</a> are detailed on the LSHTM website.
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<b>Admission deadlines</b>	<p>Applications for LSHTM distance learning courses and modules are managed by the University of London International Programmes. To apply to take either a formal award (i.e. PG Certificate, PG Diploma or MSc) or an individual module, click the relevant link on the right hand side of the page at <a href="http://www.londoninternational.ac.uk/courses/postgraduate/lshtm/infectious-diseases-msc-postgraduate-diploma-postgraduate-certificate">http://www.londoninternational.ac.uk/courses/postgraduate/lshtm/infectious-diseases-msc-postgraduate-diploma-postgraduate-certificate</a></p> <p>Key deadlines are as follows:</p> <ul style="list-style-type: none"> <li>➤ Application deadline: 31 August each year</li> </ul> <p>(Note: applicants who submit applications on or after 1 June 2017 will be required to pay an application fee of £100 at the point of submission, which will be deducted from the balance of fees payable upon registration. If the application does not result in registration, the application fee will not be refunded. No application fee will apply to applications submitted on or before 31 May 2017.)</p> <ul style="list-style-type: none"> <li>➤ Registration deadline (new students and those registering for the project module, IDM600): 30 September each year</li> <li>➤ Registration deadline (continuing students, with the exception of those registering for the project module IDM600, and those taking individual modules): 31 October.</li> </ul> <p><b>Please note:</b> <i>The academic year starts 1 October. Students who register after 1 October should note that module welcome and Collaborate sessions held in October are recorded, but they cannot request an extension to assignment submission deadlines or apply for an examination extenuating circumstance as a result of registering later than 1 October.</i></p> <p>(LSHTM research students wishing to study this module should note information given in the <a href="#">mixed mode study option</a> document.</p>
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<b>ABOUT THIS DOCUMENT</b>
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<b>This module specification applies for the academic year 2017/18.</b>
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<b>Last revised/approved</b> , by M. Bridge on 1/2/17
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Further revisions revised by
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