



## MODULE SPECIFICATION

<b>Academic Year (student cohort covered by specification)</b>	2020-21
<b>Module Code</b>	3122
<b>Module Title</b>	Parasitology & Entomology
<b>Module Organiser(s)</b>	Dr Vanessa Yardley & Dr Laith Yakob
<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>	<p>For 2020-21 this module is delivered online with some practical sessions on-campus at LSHTM.</p> <p>Where specific teaching methods (lectures, seminars, discussion groups) are noted in this module specification these will be delivered using an online platform. There will be a combination of live and interactive activities (synchronous learning) as well as recorded or self-directed study (asynchronous learning).</p> <p>The practical lab-based element of this module will be scheduled in an intensive block to give students adequate time in the laboratories and ensure any social distancing guidelines are being met.</p>
<b>Mode of Study</b>	Full-time
<b>Language of Study</b>	English
<b>Pre-Requisites</b>	Parasitology & Entomology assumes no prior knowledge of medical parasitology or entomology.
<b>Accreditation by Professional Statutory and Regulatory Body</b>	None
<b>Module Cap (Maximum number of students)</b>	45
<b>Target Audience</b>	Students studying for the MScs Medical Entomology for Disease Control and Medical Parasitology.
<b>Module Description</b>	This module covers the foundational aspects of theoretical and



	applied medical entomology and medical parasitology.
<b>Duration</b>	10 weeks at 2.5 days per week
<b>Timetabling slot</b>	Term 1
<b>Last Revised (e.g. year changes approved)</b>	09/20

<b>Programme(s)</b>	<b>Status</b>
This module is linked to the following programme(s)	
MSc Medical Entomology for Disease Control	Compulsory
MSc Medical Parasitology	Compulsory

## Module Aim and Intended Learning Outcomes

<b>Overall aim of the module</b>
The overall module aim is to: <ul style="list-style-type: none"> <li>provide an overview of the major parasitic diseases of man and their vectors.</li> </ul>

<b>Module Intended Learning Outcomes</b>
Upon successful completion of the module a student will be able to: <ol style="list-style-type: none"> <li>Demonstrate understanding of the biology and the life cycles of the major parasites and of their vectors or intermediate hosts;</li> <li>Identify the major parasites, vectors and intermediate hosts;</li> <li>Demonstrate understanding of the pathogenesis and pathology of the major parasitic diseases and the immune responses to these parasites;</li> <li>Appreciate the epidemiology of the major parasitic infections;</li> <li>Appreciate methods available for chemotherapy and control.</li> </ol>

## Indicative Syllabus

<b>Session Content</b>
The module is expected to cover the following topics: <ul style="list-style-type: none"> <li>For each disease, consideration will be given successively to: biology, life cycles, diagnosis and vector identification (where appropriate), pathogenesis and pathology, epidemiology, treatment and control;</li> <li>Vector concepts and parasite transmission;</li> <li>Biology and control of parasitic diseases;</li> <li>Research methods for Medical Entomologists and Medical Parasitologists.</li> </ul>

## Teaching and Learning

### Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	122	24%
Directed self-study	0	0%
Self-directed learning	308	62%
Assessment, review and revision	70	14%
<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. Student contact time also includes tutor-mediated activities that take place in online environments, which may be synchronous (using real-time digital tools such as Zoom or Blackboard Collaborate Ultra) or asynchronous (using digital tools such as tutor-moderated discussion forums or blogs often delivered through the School's virtual learning environment, Moodle).

The division of notional learning hours listed above is indicative and is designed to inform students as to the relative split between interactive (online or on-campus) and self-directed study.

### Teaching and Learning Strategy

About half the time will be spent on theoretical work and half on practicals. Laboratory work is particularly important, since, in addition to practical instruction, there is ample opportunity for in-depth discussion with students on aspects of particular interest. To facilitate this, a substantial number of staff will attend each practical session.

## 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 practical assessments for this module will be on-campus at LSHTM. Other assessments



### Assessment Strategy

will be online.

The module will be assessed by two practical assessments (40% total), two multiple choice assessments (20% each) and a written assessment (20%).

The first and second MCQ will take place in Term 1 (approximately Week 3 and 5 respectively).

The practical assessments will be held in Week 10 of the module.

The practical assessments test students' competence in identification of the major parasites, their vectors and intermediate hosts.

The written assessment takes place during the week before the start of Term 2 (Week 0) in January. It addresses the theoretical content taught in Term 1.

### Summative Assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Practical	2x Practical	40%	2
Timed Test (in-module test e.g. MCQ)	2 x MCQ and 1x written assessment	60%	1, 3, 4 & 5

### 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

#### Parasitology

Peters W & Pasvol G (2007) *Colour Atlas of Tropical Medicine and Parasitology*. 6<sup>th</sup> edition. London, Mosby. [Mostly colour pictures: expensive but very nice, for reference if not to buy]

Cox, F.E.G., Kreier, J.P., Wakelin, D (eds) *Topley and Wilson's Microbiology and Microbial Infections, Tenth Edition Vol. 5 Parasitology* (2007) Wiley Group [A very good source of references]

Cheesebrough, M. (2006) *District Laboratory Practice in Tropical Countries*. Cambridge University Press. [This book is designed to help those working in district laboratories in developing countries. It has a good large section on parasite diagnosis. It is available at low cost]

Farrar, J., Hotez, P., Junghanss, T., Kang, G., Lalloo, D., and White, N.J. (2014) *Manson's Tropical Diseases*. 23<sup>rd</sup> edition. Saunders, London.

Despommier, D.D., Gwadz, R.G., Hotez, P., Knirsch, C. (2005) *Parasitic Diseases*. Apple Trees Productions, LLC, Pub., New York. 5<sup>th</sup> edition. Second Printing.

Zeibig, E. (2012) *Clinical Parasitology: A Practical Approach*. 2<sup>nd</sup> edition. Saunders. ISBN-10: 1416060448 ISBN-13: 978-1416060444

Beeching, N. & Gill, G. (2014). *Lecture Notes: Tropical Medicine*. 7<sup>th</sup> edition. Wiley-Blackwell. ISBN-10: 0470658533 ISBN-13: 978-0470658536

#### Entomology

Service, M.W. (2012) *Medical Entomology for Students*. 5<sup>th</sup> edition. Cambridge University Press; ISBN 9781107668188 [A concise small paperback book providing basic information on the recognition, biology, medical importance and control of arthropods affecting human health. This is the cheapest option if you want to buy one textbook on medical entomology]

Lane, R.P. & Crosskey, R.W. (1993) *Medical Insects and Arachnids*. Chapman & Hall, London. [This expensive hardback book is required reading for those wishing to specialise in medical entomology, as it provides an excellent guide to the identification of the various arthropod groups. As a multi-author volume, it provides authoritative information on each taxonomic group, but is somewhat limited in its coverage of public health significance or control]



Rozendall, J.A. (1997) *Vector Control. Methods for use by individuals and communities*. WHO. [This cheap paperback is a really excellent review of vector control methods. It is designed to be practical, rather than theoretical, and is full of helpful illustrations. If you are ever responsible to vector control in the field, you will want this book]

Lehane, M.J. (2005). *The Biology of Blood-sucking in Insects*. 2<sup>nd</sup> Edition. Cambridge University Press; ISBN 0521836085

Roberts, L.S. & Janovy, J. (2009) *Gerald D Schmidt & Larry S Roberts' Foundations of Parasitology*. 8<sup>th</sup> edition. McGraw Hill Higher Education.

### **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](#).