MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2023-24
Module Code	3122
Module Title	Parasitology & Entomology
Module Organiser(s)	Dr Matthew Rogers
Faculty	Infectious & Tropical Diseases
FHEQ Level	Level 7
Credit Value	**CATS:** 50 **ECTS:** 25
HECoS Code	100265:100345 (1:1)
Term of Delivery	Term 1
Mode of Delivery	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.
Mode of Study	Full-time
Language of Study	English
Pre-Requisites	Parasitology & Entomology assumes no prior knowledge of medical parasitology or entomology.
Accreditation by Professional Statutory and Regulatory Body	None
Module Cap (Indicative number of students)	45
Target Audience	Students studying for the MScs Medical Entomology for Disease Control and Medical Parasitology.
Module Description	This module covers the foundational aspects of theoretical and applied medical entomology and medical parasitology.
Duration	10 weeks at 2.5 days per week

Timetabling slot	Term 1
Last Revised (e.g. year changes approved)	July 2022

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

Module Aim and Intended Learning Outcomes

Overall aim of the module
The overall module aim is to: • provide an overview of the major parasitic diseases of humans and their vectors.

Module Intended Learning Outcomes
Upon successful completion of the module a student will be able to: 1. Demonstrate understanding of the biology and the life cycles of the major parasites and of their vectors or intermediate hosts; 2. Identify the major parasites, vectors and intermediate hosts; 3. Demonstrate understanding of the pathogenesis and pathology of the major parasitic diseases and the immune responses to these parasites; 4. Appreciate the epidemiology of the major parasitic infections; 5. Appreciate methods available for chemotherapy and control.

Indicative Syllabus

Session Content
The module is expected to cover the following topics: • For each disease, consideration will be given to: biology, life cycles, diagnosis and vector identification (where appropriate), pathogenesis and pathology, epidemiology, treatment and control; • Vector concepts and parasite transmission; • Biology and control of parasitic diseases; • Research methods for Medical Entomologists and Medical Parasitologists.

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%
Total	**500**	**100%**

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
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 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%).

Assessment Strategy
The first and second MCQ will take place in Term 1 (approximately Week 5 and 10 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*. 6th 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*. 23rdedition. Saunders, London.

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

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

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

Entomology

Service, M.W. (2012) *Medical Entomology for Students*. 5th 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.* 2nd Edition. Cambridge University Press; ISBN 0521836085

Roberts, L.S. & Janovy, J. (2009) *Gerald D Schmidt & Larry S Roberts' Foundations of Parasitology*. 8th 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.