



MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2025-26
Module Code	3125
Module Title	Introduction to Disease Agents & Their Control
Module Organiser(s)	Dr Tapan Bhattacharyya
Faculty	Infectious & Tropical Diseases
FHEQ Level	Level 7
Credit Value	CATS: 25 ECTS: 12.5
HECoS Code	100265:100345 (1:1)
Term of Delivery	Term 1
Mode of Delivery	<p>For 2025-26 this module will be delivered by predominantly face-to-face teaching modes.</p> <p>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.</p>
Mode of Study	Full-time
Language of Study	English
Pre-Requisites	A class II degree in a biological, biomedical or public health orientated topic or some equivalent experience are desirable but not essential.
Accreditation by Professional Statutory and Regulatory Body	None
Module Cap (Indicative number of students)	Approximately 50 students; up to approximately 70 for sessions when the Royal Veterinary College MSc One Health students join the module on Fridays.
Target Audience	This module is a compulsory module for all students on the MSc Control of Infectious Diseases (CID).



Module Description	<p>The module provides a multidisciplinary framework for understanding the principles of interventions against infectious diseases. It specifically provides knowledge and understanding of important disease agents in the context of their routes of transmission and the potential intervention strategies, and considers some of the reasons for the success, partial success and failure of control programmes.</p> <p>Keywords: communicable diseases; infectious diseases, disease control; disease prevention and control; tropical medicine; outbreaks; transmission cycles; zoonotic diseases; epidemiology; health in emergencies; poverty; health economics; pathogens; disease vectors; biomedical sciences; parasitic; malaria; TB; HIV/AIDS; sexual and reproductive health; behaviour; bacterial; viral; worm infections; food; water; sanitation; statistics; social science; research; multidisciplinary; international; global; rural urban; teaching; communication; public health; health policy; health systems; vulnerable groups.</p>
Duration	10 weeks at 2.5 days per week
Timetabling slot	Term 1
Last Revised (e.g. year changes approved)	June 2024

Programme(s)	Status
This module is linked to the following programme(s)	
MSc Control of Infectious Diseases	Compulsory
MSc One Health: ecosystems, humans and animals (Royal Veterinary College)	Compulsory for RVC students to attend advised sessions, usually on Fridays as part of their Infectious Disease Emergence & Control module.



Module Aim and Intended Learning Outcomes (ILO)

Overall aim of the module

The overall module aim is to:

- provide a multidisciplinary framework for understanding the principles of interventions against infectious diseases (in conjunction with other core term 1 components for MSc CID). This module specifically provides knowledge and understanding of important disease agents in the context of their routes of transmission and the potential intervention strategies, and considers some of the reasons for the success, partial success and failure of control programmes.

Module Intended Learning Outcomes

Upon successful completion of the module a student will be able to:

1. Describe the importance of principal major pathogens in the different regions of the world;
2. Apply knowledge of the life cycles of a range of pathogens to their transmission routes and pathogenesis, and to the selection of appropriate interventions;
3. Understand the principles of outbreak investigation/rapid response;
4. Outline the practicalities and limitations of behavioural approaches to case detection and diagnostic techniques for these pathogens;
5. Appreciate the inter-relationships between clinical skills, laboratory science, epidemiology, social behaviours and health policy in the selection of interventions;
6. Select appropriate interventions, taking account of the diverse social, political and economic contexts in which health systems operate;
7. Assess the implementation of interventions and understand reasons for their success and failure.

Indicative Syllabus

Session Content

The module is expected to cover the following topics:

- The life cycle and characteristics of major infectious disease agents according to their principal transmission routes, namely: respiratory (proximity) diseases; contact diseases; water-borne; food-borne; sexually transmitted; blood-borne; congenital and perinatal; arthropod vector-borne; opportunistic, or emergent infections. This will include examples of laboratory methods for identifying disease agents.
- The principal intervention strategies used to combat such infectious diseases, namely: case management, vaccination, treatment and chemoprophylaxis, the many



Session Content

means of preventing exposure, from individual protection to environmental management, and the principles of outbreak investigation/rapid response.

- Analysis of factors contributing to the success or failure of systems of control and intervention strategies will be considered including: fundamental scientific difficulties with implementation procedures; managing people and resources; contextual problems associated with finance and interagency relationships; social and political issues.

Teaching and Learning

Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	120	48%
Directed self-study	60	24%
Self-directed learning	20	8%
Assessment, review and revision	50	20%
Total	250	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

Teaching methods will include mostly in-person and a few remote lectures, practical demonstrations, group discussions, debates and problem-solving exercises that will build on the previous experience and future career intentions of the students.

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 (non-graded) assessment methods to measure students' progress will take the form of:

(i) an essay (approx. 1000 words) on a topic relevant for the module ILOs and reviewed by their personal tutor to provide feedback. Although not compulsory, the students are encouraged to do this.

(ii) practice short essays (<1000 words) responding to questions used in previous summative assessments. These will be introduced and discussed in timetabled, guided sessions, and can be reviewed in peer groups to provide feedback.

Summative Assessment: During Week 0 of Term 2, students will sit an in-person written assessment of unseen short essay questions, in which 2 of 6 questions will be answered, each of 1000 words approximately. The questions are designed to allow the students to demonstrate holistic application of their learning and knowledge. Only the grade from the summative assessment will go towards the overall award GPA.

Summative Assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
In-person written assessment	Approximately 1000 words for each essay.	100	1-7

Resitting assessment

Resits will accord with [Chapter 8a](#) of the LSHTM Academic Manual

The Resit assessment will be the same assessment type as the first attempt (see previous table).

Resources

Indicative reading list

Presenters of each component of the module are requested to provide specific, appropriately diverse, reading lists.



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 (ideally) prior to the lecture (in pdf format), dependent on receipt from the presenter. All lectures are recorded and made available on Moodle as quickly as possible. All materials posted on Moodle areas, including computer-based sessions, have been made accessible where possible.

Presenters may also provide on Moodle summary transcripts for their lectures.

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, 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](#).