



## MODULE SPECIFICATION

<b>Academic Year (student cohort covered by specification)</b>	2024-25
<b>Module Code</b>	3400
<b>Module Title</b>	Epidemiological Methods Applied to Eye Diseases
<b>Module Organiser(s)</b>	Ian McCormick, Fatima Kyari & Islay Mactaggart
<b>Faculty</b>	Infectious & Tropical Diseases
<b>FHEQ Level</b>	Level 7
<b>Credit Value</b>	<b>CATS:</b> 10 <b>ECTS:</b> 5
<b>HECoS Code</b>	100261:101335 (1:1)
<b>Term of Delivery</b>	Term 1
<b>Mode of Delivery</b>	For 2024-25 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).
<b>Mode of Study</b>	Full-time
<b>Language of Study</b>	English
<b>Pre-Requisites</b>	None, although experience of eye health would be an advantage
<b>Accreditation by Professional Statutory and Regulatory Body</b>	None
<b>Module Cap (Indicative number of students)</b>	No cap
<b>Target Audience</b>	This module is a compulsory module for MSc Public Health for Eye Care. It is suitable for aspiring or established eye health care professionals of various cadres: Ophthalmologists, Optometrists, Researchers; Eye Care Programme Managers and other senior health workers involved in planning or delivery of eye care services.

<b>Module Description</b>	This module covers the principles of epidemiology as applied to the major causes of blindness. Features of the different epidemiological study designs to address eye health research questions will be explored, and an overview of the evidence base around the major causes of blindness, including prevention and treatment will be provided. Additional work will be involved on interpretation of the strength of evidence from a range of different study types as applied to blinding eye disease.
<b>Duration</b>	3 weeks at 2 days per week
<b>Timetabling slot</b>	Term 1
<b>Last Revised (e.g. year changes approved)</b>	August 2024

<b>Programme(s)</b>	<b>Status</b>
This module is linked to the following programme(s)	
MSc Public Health for Eye Care	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>teach how epidemiological approaches and research methods are applied to public health in eye care using examples from a variety of contexts</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>Understand the key terminology used in epidemiology as applied to eye health</li> <li>Describe key features of different epidemiological study designs to address eye health research questions</li> <li>Appraise the magnitude and causes of vision loss and blindness in different socioeconomic settings</li> <li>Evaluate the application of study designs to the understanding of the aetiology and risk factors for the major blinding diseases</li> <li>Critically appraise scientific evidence on the epidemiology of blinding eye diseases and its relevance to equitable and inclusive eye health planning and service delivery</li> </ol>

## Indicative Syllabus

### Session Content

The module is expected to cover the following topics:

- Principles of epidemiology as applied to the major causes of blindness;
- Features of the different epidemiological study designs to address eye health research questions;
- Overview of the evidence base around the major causes of blindness, including prevention and treatment;
- Interpretation of the strength of evidence from a range of different study types as applied to blinding eye disease.

## Teaching and Learning

### Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	30	30
Directed self-study	20	20
Self-directed learning	15	15
Assessment, review and revision	35	35
<b>Total</b>	<b>100</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

The programme will be taught through a variety of teaching methods including: lectures, quizzes, articles or research papers to read and critically appraise (provided digitally), small group seminars, practical exercises and groupwork with peers. Live face to face teaching will be complemented with directed self-study and asynchronous learning material resource provision.

Formative assessments will complement the other taught components to ensure understanding of the material delivered and highlight areas where understanding is poor.



### **Teaching and Learning Strategy**

Written formative assessment will involve critical review of published papers of epidemiological studies of common eye diseases using structured short answer questions and these formative assessments may be peer-marked and then discussed in pairs, small groups or in plenary.

## **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 assessment for this module in term 1 will be undertaken on laptops, but the exam will be held in LSHTM, in person with invigilators.

**Formative:** In order to assess progress, in-class discussions will be complemented by a written formative assessment during the module in which students will critically review published papers of epidemiological studies of common eye diseases using structured short answer questions. This will also help prepare the students for the summative assessment which will take a similar format.

**Summative:** the module has an end of module assessment consisting of short answer questions, which will take place on the last day of the module. The understanding of the subject will be the focus of this summative assessment and short answer questions are, from experience of this module, good discriminators of understanding, without being overly punitive if students misunderstand a question or a particular question finds a gap in a particular student's knowledge or understanding. The formative assessments will be similar in style to the summative assessment, so that students are well prepared for this assessment.

Summative assessment will map tightly to the learning objectives and will ensure learning across the content, with each content area being potentially examined.

1. The short answer questions will directly ask students to describe key features of different epidemiological study designs and relate these to eye health research questions.
2. Knowledge of the magnitude and causes of vision impairment and blindness in different socio-economic settings will be necessary to answer questions effectively.



### Assessment Strategy

3. Failure to have understood the aetiology and risk factors for the major blinding diseases will be detected through the assessment.
4. Short answer questions will include some stems that describe scientific studies and questions will then test critical thought processes.

### Summative Assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Timed Test (Short Answer Questions)	3 hours	100	1 – 5

### 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

Everyone, please read:

1. *"Causes of blindness and vision impairment in 2020 and trends over 30 years, and prevalence of avoidable blindness in relation to VISION 2020: the Right to Sight: an analysis for the Global Burden of Disease Study"* Lancet Glob Health. 2021 Feb; 9(2): e144–e160. doi: 10.1016/S2214-109X(20)30489-7

It can be downloaded here:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7820391/>

2. *"The Lancet Global Health Commission on Global Eye Health: vision beyond 2020"*

The Lancet Global Health Commission | Volume 9, ISSUE 4, e489-e551, April 01, 2021

This can be viewed or downloaded at:

[https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(20\)30488-5/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(20)30488-5/fulltext)

3. The World report on Vision from the WHO is available at:

<https://www.who.int/publications/i/item/world-report-on-vision>.

Finally, the Journal of Community Eye Health is available online <https://www.cehjournal.org/> or as an app that can be downloaded from Google Play or the Apple App store. We recommend that you read the centenary issue which provides a rich overview of the main issues in global eye health:

<https://www.cehjournal.org/celebrating-30-years-and-100-issues-1988-2018-how-far-have-we-come/>



## Teaching for Disabilities and Learning Differences

The module-specific site on Moodle provides students with access to slides used during the lecture. 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](#).

- Each session on the module has copies of the slides made available to students via the Moodle.
- All synchronous sessions are recorded so students wishing to listen again can work through the audio, and view the slides via the handouts to revise the session.
- Presentations have all been evaluated for accessibility to ensure equity of access to learning resources.