



## MODULE SPECIFICATION

<b>Academic Year (student cohort covered by specification)</b>	2021-22
<b>Module Code</b>	2407
<b>Module Title</b>	Epidemiology of Non-Communicable Diseases
<b>Module Organiser(s)</b>	Professor Isabel dos Santos Silva, Dr Helena Carreira, Dr Abena Amoah, Ms Aimilia Exarchakou
<b>Faculty</b>	Epidemiology & Population Health
<b>FHEQ Level</b>	Level 7
<b>Credit Value</b>	<b>CATS:</b> 15 <b>ECTS:</b> 7.5
<b>HECoS Code</b>	101335
<b>Term of Delivery</b>	Term 2
<b>Mode of Delivery</b>	For 2021-22 this module is currently planned as a mixture of online and face to face teaching.  Teaching will comprise 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>	Students will be expected to have a good knowledge of epidemiological methods including familiarity with the different study designs, their analysis and interpretation. They should normally have attended the Extended Epidemiology (2007) module in Term 1; however, students that attend the Basic Epidemiology (2001) module will also be considered.
<b>Accreditation by Professional Statutory and Regulatory Body</b>	N.A.
<b>Module Cap (indicative number of students)</b>	60 (numbers may be capped due to limitations in facilities or staffing)
<b>Target Audience</b>	This module is intended for those with an interest in non-communicable diseases including those concerned with public health in low- and middle-income countries.
<b>Module Description</b>	Participants will be introduced to and interact with evidence on the <i>status quo</i> , trends, research and policy priorities of both major and neglected non-communicable diseases. Through lectures, seminars, and practical sessions, the module covers: introduction to and major themes in non-communicable disease (NCD) epidemiology (week 1); epidemiology of common chronic conditions (cardiovascular disease, cancer, diabetes, respiratory illnesses) and disease burden (week 2); neglected NCDs, nutrition and environment (week 3); and advanced topics in NCD epidemiology (week 4).

	Students write a brief assessment (1,500 words) on a topic discussed in week 1-2. Furthermore, they sit a short essay question exam covering topics from week 3 and 4.
<b>Duration</b>	5 weeks at 2.5 days per week
<b>Timetabling slot</b>	Slot D1
<b>Last Revised (e.g. year changes approved)</b>	August 2021

<b>Programme(s)</b>	<b>Status</b>
This module is linked to the following programme(s)	
MSc Epidemiology	Recommended
MSc Health Policy, Planning & Finance	Recommended
MSc Public Health	Recommended
MSc Public Health (Environment & Health)	Recommended
MSc Public Health (Health Promotion)	Recommended
MSc Public Health for Development	Recommended

## Module Aim and Intended Learning Outcomes

<b>Overall aim of the module</b>
<p>The overall module aim is to:</p> <ul style="list-style-type: none"> <li>• provide an overview and stimulate critical thinking on the importance of, and trends in, non-communicable diseases globally, including low- and middle-income countries;</li> <li>• generate an appreciation of the drivers of the burden of non-communicable diseases and how this knowledge can be used for prevention and control;</li> <li>• identify methodological and conceptual issues for studying, measuring and analysing non-communicable diseases and their prevention strategies.</li> </ul>

<b>Module Intended Learning Outcomes</b>
<p>Upon successful completion of the module a student will be able to:</p> <ol style="list-style-type: none"> <li>1. Appreciate the growing global importance of non-communicable diseases across low-, middle- and high-income countries;</li> <li>2. Identify the major determinants of non-communicable diseases and the key challenges faced by epidemiology and public health in studying and controlling these conditions.</li> </ol>

## Indicative Syllabus

### Session Content

The module is expected to cover the following topics:

- Week 1: Introduction to, and emerging themes in Non-Communicable Disease Epidemiology – A global perspective.
- Week 2: Describe the trends, distribution, and key determinants of the disease burden and mortality associated with the “big four” (cancer, CVDs, respiratory illness and diabetes) and the challenges for their prevention and control.
- Week 3: Describe the trends, distribution, and key determinants of the disease burden and mortality associated with neglected NCDs, and environmental and nutrition related NCDs and the challenges for their prevention and control.
- Week 4: Advanced topics in epidemiology of NCDs (genetic epidemiology, approaches to deal with bias and confounding in NCD studies).
- Written Assessment: Communicating evidence to policy-makers, scientists and/or the general public.
- Exam: Apply transferable skills to new NCD questions and challenges.

## Teaching and Learning

### Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	30	20%
Directed self-study	45	30%
Self-directed learning	35	23%
Assessment, review and revision	40	27%
<b>Total</b>	<b>150</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 and seminars 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

This module consists of a mixture of interactive lectures, seminars, practical sessions and (self) directed study. The module uses a variety of teaching and learning methods to facilitate the learning of different types of students, including:

- Research-informed teaching (using current literature)
- Promoting active learning through:
  - \* Peer-to-peer discussions and feedback



### **Teaching and Learning Strategy**

- \* Facilitator-led discussions and feedback
- Flipped classroom approaches

Formative tasks include:

- seminar presentations;
- leading classroom discussions on an NCD topic;
- Peer-review on assessment drafts.

## **Assessment**

### **Assessment Strategy**

The module features a combination of formative and summative assessments to stimulate critical thinking, application knowledge on NCDs in various settings, and communicating evidence to various audiences.

#### **Formative Assessments:**

- For the module's 2 seminar sessions, students are divided into groups. In each session, 4-5 students lead a discussion and critical appraisal of a paper on an NCD topic, and present the evidence to their seminar groups.
- After week 2 students are paired up with a fellow student and provide peer-feedback on assessment drafts.
- Students will complete a practical session on the use of open source data for epidemiology and control of NCDs.

#### **Summative Assessments:**

- After the first week of lectures, students will select a topic for their written assessments. They will be introduced to technical briefs, scientific posters and public engagement proposals and decide on a format to match their topic. They will work throughout the module on communicating their evidence to policy makers, academic audiences or the general public, thereby demonstrating their understanding of the wider NCD evidence base, its interpretation and the relevance for various audiences. Deadline for the assessment hand-in is in week 5.
- In week 5 students sit a timed open book exam covering all lectures, seminars and practical sessions in week 3 and 4.

## Summative Assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Coursework	1500 words	50	ILO 1 & 2
Timed Test (in-module test e.g. MCQ)	Short essay questions (choice of 2 out of 4) – 2 hours	50	ILO 1 & 2

### Resitting assessment

Resits will accord with the LSHTM's [Resits Policy](#)

Resit/deferred/new attempts – The task will be a timed exam and/or a resubmission of a written assessment. All resits will take place in September. If students failed one component of the summative assessment, but passed the other component they will be given the opportunity to only resit the component that they failed.

## Resources

### Indicative reading list

Roman AV, Perez W, Smith R. A scorecard for tracking actions to reduce the burden of non-communicable diseases. *The Lancet*. 2015;386(9999):1131-1132. doi:10.1016/S0140-6736(15)00197-X

Beaglehole R, Bonita R, Ezzati M, et al. NCD Countdown 2025: accountability for the 25 × 25 NCD mortality reduction target. *The Lancet*. 2014;384(9938):105-107. doi:10.1016/S0140-6736(14)61091-6

Pearce N, Ebrahim S, Mckee M, et al. The road to 25×25: how can the five-target strategy reach its goal? *The Lancet Global Health*. 2014;2(3):e126-e128. doi:10.1016/S2214-109X(14)70015-4

Frumkin H and H. Global Environmental Change and Noncommunicable Disease Risks. <http://ez.lshtm.ac.uk/login?url=https://www.annualreviews.org/doi/abs/10.1146/annurev-publhealth-040218-043706>

Prynn JE, Kuper H. Perspectives on Disability and Non-Communicable Diseases in Low- and Middle-Income Countries, with a Focus on Stroke and Dementia. *International Journal of Environmental Research and Public Health*. 2019;16(18). doi:10.3390/ijerph16183488



Ngo VKR. Grand Challenges: Integrating Mental Health Care into the Non-Communicable Disease Agenda. *PLoS Medicine*. 2013;10(5):e1001443-. doi:10.1371/journal.pmed.1001443

Bray F, Jemal A, Grey N, Ferlay J, Forman D. Global cancer transitions according to the Human Development Index (2008–2030): a population-based study. *Lancet Oncology*. 2012;13(8):790-801. doi:10.1016/S1470-2045(12)70211-5

Grigoriev P, Meslé F, Shkolnikov VM, et al. The Recent Mortality Decline in Russia: Beginning of the Cardiovascular Revolution? *Population and Development Review*. 2014;40(1):107-129. doi:10.1111/j.1728-4457.2014.00652.x

Worldwide trends in insufficient physical activity from 2001 to 2016: a pooled analysis of 358 population-based surveys with 1·9 million participants. 6(10):e1077-e1086. [https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(18\)30357-7/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(18)30357-7/fulltext)

Danaei G, Finucane MM, Lu Y, et al. National, regional, and global trends in fasting plasma glucose and diabetes prevalence since 1980: systematic analysis of health examination surveys and epidemiological studies with 370 country-years and 2·7 million participants. *The Lancet*. 2011;378(9785):31-40. doi:10.1016/S0140-6736(11)60679-X

Soriano JB, Antó I Boqué JM, Vos T, Global Burden Of Disease (Gbd) 2015 Chronic Respiratory Disease Collaborators. Global, regional, and national deaths, prevalence, disability-adjusted life years, and years lived with disability for chronic obstructive pulmonary disease and asthma, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015. *The Lancet Respiratory Medicine*. 2017;5(9):691-706. doi:10.1016/S2213-2600(17)30293-X

Ezzati M, Obermeyer Z, Tzoulaki I. Contributions of risk factors and medical care to cardiovascular mortality trends. *Nat. Rev. Cardiol*. 2015; 812(9): 508 doi:10.1038/nrcardio.2015.8

### **Other resources**

Module information can be found on the Virtual Learning Environment (Moodle) containing information about each session and key references for the module. Course information, timetable, lecture notes, key literature for each session, seminar information and assessment examples from previous years. In addition, access to the distance learning Epidemiology of Non-Communicable Diseases (ENCD) module is provided as optional additional material.



## Teaching for Disabilities and Learning Differences

The module-specific site on Moodle gives students access to lecture notes and copies of the slides used during the lecture. Where appropriate, lectures are recorded and made available on Moodle. All materials posted on Moodle, including computer-based sessions, have been made accessible where possible.

LSHTM Moodle is accessible to the widest possible audience, regardless of specific needs or disabilities. More detail can be found in the [Moodle Accessibility Statement](#) which can also be found within the footer of the Moodle pages. All students have access to “SensusAccess” software which allows conversion of files into alternative formats.

Student Support Services can arrange learning or assessment adjustments for students where needed. Details and how to request support can be found on the [LSHTM Disability Support pages](#).