Acute and Chronic Infectious Diseases (IEHC0031)

**Description**
This module aims to provide an understanding of the important and common infections, and the diseases that they cause, in the population. Throughout the module, learning will adopt a population health approach and refer to the main components of the BSc Population Health programme (i.e. quantitative methods; social theory) as well as to public and individual health policy. Teaching will relate mainly to UK infectious disease epidemiology but also to other global regions. You will cover a range of topics, including

- Basic principles of host-pathogen interaction in humans
- How climate, geography and environment affect infectious diseases in human populations
- Introduction to modelling the spread of communicable diseases.
- Social, economic and structural changes as drivers of change in infectious disease.
- Public health interventions and systems for control of infection, including national and international surveillance.
- Vaccine-preventable diseases, vaccine policy and implementation.
- Sexual health and sexually-transmitted diseases
- Successes and challenges in responses to epidemics.
- Antibiotics and antibiotic resistance.
- Infections that cause "non-communicable" diseases.

By the end of the module, you will be able to do the following:

1. Define the terms used to describe infectious diseases in human populations.
2. Explain how climatic, environmental, societal, development and geographic factors affect infections, giving examples of interventions to manipulate these factors.

**Key information**

- **Year**: 2020/21
- **Credit value**: 15 (150 study hours)
- **Delivery**: UG L5, Campus-based
- **Reading List**: View on UCL website
- **Tutor**: Dr Mona Bajaj-Elliott
- **Term**: Term 1
- **Timetable**: View on UCL website

**Assessment**

For more information about the department, programmes, relevant open days and to browse other modules, visit [ucl.ac.uk](http://ucl.ac.uk)
Appraise mathematical modelling as an approach to infectious disease, and illustrate how it can be used in public health practice.

Describe approaches to vaccination, identifying the strengths and weaknesses of each.

Define surveillance, and describe the ways in which surveillance is conducted in the UK.

Contrast the ways in which sexually transmitted infections differ in their population dynamics from other infections.

Describe recent epidemics and outbreaks and the national and international responses.

Outline the main drivers of, and challenges arising from, antibiotic resistance.

Appraise established theories and less well-established hypotheses of how infections may lead to chronic disease.

This is an intermediate module open to Year 2 students on the BSc Population Health module. There is availability for UCL elective students from other departments. However, spaces are limited to 40 and are allocated on a ‘first come, first served’ basis on Portico, with preference given to BSc Population Health students.

Teaching will take place in Term 2 in the form of taught lectures by scientists and clinicians actively researching in infectious diseases. Moreover, you will engage in group discussions (including e-learning discussion groups) in which you will critique scientific papers, discuss surveillance reports, public health policy documents etc. Additionally, there will be problem-based classes looking at interpretation of datasets and reports to demonstrate principles introduced in lectures.

You will be assessed in the form an unseen two-hour written exam counting for 100% of your total mark for this module. There will also be a formative oral presentation.

**Selected Reading List**

Mim’s Medical Microbiology (Eds: Goering et al)

Medical Microbiology and Infection at a Glance (Gillespie & Bamford)

Infectious Disease (Bannister, Begg & Gillespie)