



UNIVERSITY
OF LONDON
INTERNATIONAL
PROGRAMMES

A new short course by distance learning

Management of Infectious Disease Outbreaks in Animal Populations

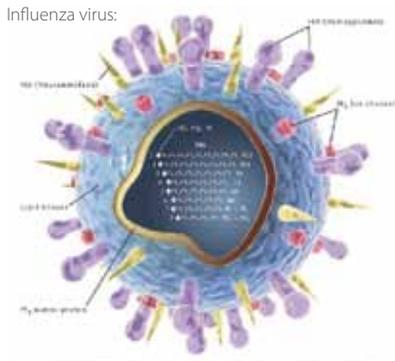


Academic direction by:



Royal
Veterinary
College
University of London

Influenza virus:



This course is designed to provide you with both comprehensive theoretical knowledge and practical tools for the management of major infectious diseases in livestock.

Infectious diseases of livestock are no longer only the domain of farming communities and the veterinary profession. Many of the infectious diseases that affect livestock are of the epidemic type and tend to have rapid and explosive spread. The impact of these diseases is felt not only in their effect on the animal (sickness and sometimes death), but also as the consequent loss of productivity and reduced farm income, the economic losses from curtailed international trade in live animals and their products, and often the effect they have on people who may become infected with zoonotic diseases.

We are now living in an increasingly interconnected world with high levels of national and international population movements and changing climatic conditions; episodes of emerging and re-emerging diseases are a consequence of these global changes that the world has to contend with. The appearance of diseases such as West Nile virus in the USA and Bluetongue in the UK illustrates the ease with which disease agents can move to new geographic locations and establish themselves. Rift Valley fever reappeared in Kenya in 2006/2007, leaving close to 100 people dead and others infected. The re-emergence of the disease was attributed to unexpected heavy rainfall that caused flooding and created breeding grounds for mosquitoes which spread the virus of the fever from infected livestock to humans.

The effective control and management of infectious livestock diseases depends to a large extent

on an understanding of the epidemiology of the disease. Also important is an understanding of the interplay between agent, host and environment, in developing interventions to control outbreaks of these infectious diseases and strategies to eradicate their causal pathogens. Surveillance for early recognition of disease problems, effective responses to prevent the spread of the disease and reliable predictive capabilities are all essential in the management of infectious disease outbreaks.

What will you learn from this course?

By the end of this course you should be able to:

- describe the epidemiological concept of disease transmission and related factors, and explain the epidemiological aspects of the relationship between host, agent and the environment
- explain the role of economic analysis in animal health management
- describe monitoring and surveillance approaches
- outline measures needed to prevent the introduction of a disease into a country
- make recommendations on the most appropriate control methods for different diseases
- identify the highest-threat emergency animal diseases for your country, know where those threats are likely to come from and recognize how they will manifest themselves.

Study time

The entire course, including revision and examination, is designed to take approximately 240 hours to complete. This is only an estimate and will depend upon your previous familiarity with the subject.

The individual unit topics are:

- Unit 1** Viral Agents and Disease Processes
- Unit 2** Epidemiology
- Unit 3** Risk Analysis and Economics in Disease Control
- Unit 4** Detection of Disease: Surveillance and Diagnosis
- Unit 5** Prevention of Disease and Response to Disease
- Unit 6** Control of Infectious Viral Diseases
- Unit 7** Emergency Preparedness and Contingency Planning
- Unit 8** Managing an Outbreak of a Previously Unknown Disease
- Unit 9** Foot and Mouth Disease
- Unit 10** Managing Acute Infections in a High-Density Avian Population
- Unit 11** West Nile Virus

Assessment

Your work for this course will be assessed by means of a three-hour unseen written examination paper which will take the form of essay questions. In addition, you must submit at least one (and you may submit a maximum of three) Tutor Marked Assignments (TMA's). The grade awarded will be based on the mark obtained in the written examination (80%) and on the mark for the compulsory TMA (20%).

Flexibility to study wherever, whenever and however you like

As this course is offered by distance learning, you can fit your study around your family or professional commitments. You may decide to do this short course on its own for interest or professional development. Or, it is also offered as an optional module within our distance learning MSc/Postgraduate Diploma programme in Livestock Health and Production and Veterinary Epidemiology and Public Health.