

One Health – 5-week course

Course with tailored elements under the DFC Scholarship Programme

Overall description of course

Course Title: One Health

Course Dates: 2 March to 3 April, 2020

Target Group: The course will target up to 25 participants. Participants must be related to the Danish Strategic Sector Cooperation (either directly or indirectly). Participants are expected to have a post-graduate education (MSc) within the science area or extensive working experience within food safety. Participants must as a minimum have a bachelor degree in a relevant field and must have a good command of English.

Course Responsible: Anders Dalsgaard (adal@sund.ku.dk), Department of Veterinary and Animal Sciences, University of Copenhagen.

Exam: Pass/non-pass with diploma based on 100% participation in course activities.

Course focus

This 5-week One Health course is a full-time course, which will be partly taught jointly with the One Health specialization course under the Danish veterinary education program. The content will be tailored to meet needs of participants through the DFC Scholarship Programme.

'One Health' is a methodological approach, which implies interdisciplinary collaboration, joint efforts and communication in all aspects of veterinary and public health aiming to protect humans, animals and the environment.

Recent challenges requiring a One Health approach include the Avian Influenza epidemics and spread of antimicrobial resistance. Both problems have highlighted the importance of close collaboration between the medical-, veterinary-, food and agriculture sectors in prevention and control. Experience has shown that collaboration between the research community, authorities, industry and other stakeholders is essential in prioritized decision making and timely and effective prevention and control.

The overall objective of this course is for the participants to acquire in-depth knowledge about the One Health approach when solving national, regional and global challenges.

Special focus will be on health problems associated with the spread of pathogens from animals and humans (zoonoses):

- transmission and exposure
- molecular and epidemiological methods in surveillance
- outbreak investigations
- mapping of zoonotic pathogens, antibiotic resistance

Learning goals

As a result of the course, participants will have acquired knowledge and skills that enable them to:

- Understand the One Health concept and interdisciplinary aspects.
- Apply various scientific methods to specific One Health problems.
- Critically discuss and respond to One Health challenges.
- Identify the roles, responsibilities and needs of key stakeholders in prevention and control of infectious diseases.
- Take part in the work in an interdisciplinary group aiming to solve a complex health challenge in a constructive manner drawing on own core competences.
- Critically evaluate other people/organization's suggestions to solutions to One Health challenges.
- Apply leadership competences required for One Health solutions to be applicable and successful.

Approach to mandatory learning elements

- **Learning by seeing** (Exposure visits): The course will include visits to relevant authorities, companies, etc.
- **Learning by doing/applying**: The course will have a strong focus on active participation in problem-based group work and practical exercises. Exercises and problem-based learning will involve cases / scenarios in which the course participants will work in groups under supervision from teachers and external contributors. Through case work the participants will learn how to develop systematic, stepwise approaches into cost-efficient and sustainable disease control programs based on evidence from literature and new/own investigations of zoonotic diseases and other food safety problems. Approaches to handling both foodborne (e.g. salmonella, campylobacter, VTEC 0157), waterborne (e.g. cryptosporidia) and air-, vehicle or vector-borne pathogens (e.g. West Nile Fever, Q-fever) will be addressed during the course.
- **Learning by example (peer learning)**: Participants will each present and discuss challenges they are facing in their home countries and solutions to these.
- **Translating learning into action (Action Plan)**. During the course, participants will have guided project work sessions, in which they will apply and relate themes and concepts from the lectures to their own case.
- **Passing on learning**: After course completion, participants will be able to instruct colleagues at their institutions.

Tentative course programme

- Introduction and exercises on One Health and One Medicine (week 1)
- Visits to WHO Europe and lectures and cases by WHO experts (week 1)
- Zoonoses – food safety – outbreak investigations (week 2)
- Zoonoses case work - excursions (week 3)
- Infectious disease prevention and control – global challenges and programs (week 4)
- Antibiotic resistance – prevention and control – case work (week 5)