ECVPH RESIDENT'S COURSE

APPLICATION OF MICROBIOLOGICAL RISK ASSESSMENT AND MANAGEMENT IN RISK-BASED FOOD SAFETY ASSURANCE SYSTEMS

May 19th - 23rd 2025, Virtual, Zoom

ECVPH
EUROPEAN COLLEGE OF VETERINARY PUBLIC HEALTH

UNIVERSITY OF LIVERPOOL

Programme (2ECTS points):

All course days start at 10.00 and end at 17.00 (CET), with one hour break for lunch.

Monday 19th May:

Epidemiology and control of main biological foodborne hazards in food chain (pre-harvest, harvest and post-harvest)
Principles and concepts of risk analysis in food chain (ALOP principle and FSO concepts); Risk assessment of foodborne risks
Group work: Rapid risk assessment of the risk of acquiring infection from specified meat products (case studies on different foodborne pathogens)

Tuesday 20th May:

Food microbiology and technology aspects of meat products production in relation to public health and hurdle systems
Food microbiology and technology aspects of cheese production in relation to public health and hurdle systems
Public health aspects of the consumption of seafood and related controls
Group work: Hazard identification, risk ranking and prioritisation of the foodborne risks from meat products and cheeses (hazard occurrence, severity, DALY, dose-response, predictive growth modelling)

Wednesday 21st May:

Food safety assurance systems, Food safety management systems (FSMS), prerequisites and HACCP in meat and cheese production
Risk-based food safety assurance systems: Legislation, components, targets and application
Group work: Multi-criteria risk categorisation of farms and abattoirs (with a focus on utilising a model tool for the performance assessment of FSMSs)

Thursday 22nd May:

Food safety management systems: abattoir interventions and hurdle systems
Food safety management systems: validation, verification and audit
Group work: FSMS validation and verification (microbiological criteria, CCP validation, interventions' performance assessment)

Friday 23rd May:

Evolution of traditional meat inspection into a risk-based, modern and flexible one
Digital transformation of meat inspection and related controls
Group work: Hazard ranking and prioritisation for meat inspection

Participants

This intensive 5-day course is aimed at ECVPH residents from both subspecialties. The participants should already have a basic understanding of the topics that will be covered, some didactic teaching will be provided, and residents are expected to work in smaller groups on practical cases. All course material will be made available 7 days in advance and for 2 weeks afterwards.

Mode

Online with live lectures followed by live question & answer sessions and then live small group practical sessions.

Course Leader

Dr Dragan Antic (DVM, MSc, PhD, FHEA, DipECVPH)

Dragan Antic is Senior Lecturer in Veterinary Public Health at the Institute of Infection, Veterinary and Ecological Sciences, University of Liverpool. He is the organiser of this course and will deliver the whole course content. He has an extensive undergraduate and postgraduate teaching experience in high education veterinary establishments for more than 20 years, in Veterinary public health, Food safety and hygiene. He has an extensive research experience within food safety microbiological risk assessment and risk management, particularly policy-led food microbiology and meat inspection topics, epidemiology of main foodborne pathogens (STEC, Campylobacter, Yersinia and ESBL-producing E. coli), development of interventions within food safety assurance systems and modernisation of meat inspection. He is a Member of UK Food Standards Agency's Advisory Committee on the Microbiological Safety of Food (ACMSF).

Course Description

There are ongoing efforts to modernise food safety controls in Europe and in light of these, it is paramount that ECVPH residents are familiar with newest developments in this regard, in research, policy and everyday FBOs work in food production. This course will build up on the basics that each resident should have and introduce them to new concepts and their applications through practical examples. Prior to the start of this course, residents will be given reading material related to the course content. The course will be structured and delivered over five full days online (Monday to Friday), usually three hours of didactic learning in the morning and then three hours of work afternoon in small groups on practical assignments and group discussions facilitated by the lecturer. Finaly the groups will present their findings to each other in a form of large group discussion. The course would therefore be a mixture of lectures, coursework and discussion groups. With the preparation (reading) prior to the course, it will count 2 ECTS towards residents' training programmes.

Aim of the course

For each resident to gain an understanding of the basic and more advanced concepts in food safety microbiological risk assessment and risk management, to the extent that they would be able to comfortably work on practical group-based assignments. All mentioned curriculum elements would be covered in various way and through knowledge application working on practical risk assessment/management components (which is important since most of these clusters in the curriculum are designed to have some practical activity included). Given that most mentioned curriculum elements from PM and FS parts are also included in the Core part (with various levels of depth), the whole course content will be of interest to both subspecialties of the college.

By the end of this course, residents will be able to understand and apply on practical examples the knowledge about food safety risk assessment/management and making risk-based decisions in the food chain.

What does the course cover?

The main areas taught will correspond to the elements of ECVPH curriculum (listed below) and will be:

- Epidemiology and control of microbiological foodborne hazards and marine biotoxins
- Risk assessment components and prerequisites (profiling, ranking, prioritisation): various foodstuff (cheeses, meat products) and/or red and white meat animals species combined with foodborne pathogens
- Risk management of microbiological foodborne hazards at pre-harvest, harvest and post-harvest stage in various foods (meats, dairy, shellfish): Interventions at farm and abattoir level and food processing technologies
- Risk-based meat inspection: Practical solutions to modernisation of meat inspection based on different cases
- Risk-based meat safety assurance systems: Risk categorisation of farms and abattoirs based on different cases

Elements of the ECVPH Curriculum that are covered with this course

1. **Core curriculum, Subcluster A1: Food borne and non-food borne zoonoses:** aetiology, occurrence, transmission and control at farm, processing and post-processing stages.
2. **Core curriculum, Subcluster A4: Food science:** food chain (from animal production to the final product on the shelf); food production systems, food technology in relation to PH, food microbiology, food preservation, biological hazards.
3. **Core curriculum, Subcluster A5:** Food safety and control: responsibility of food business and competent authorities, self-control and Food Safety Management Systems (FSMS), food inspection, hurdle systems.
4. **Core curriculum, Subcluster A6:** Non-infectious hazards in food: marine biotoxins.
5. **Core curriculum, Subcluster C2:** Science-based policy making: using scientific research to make risk-based policy decisions.
6. **Core curriculum, Subcluster C4:** Risk analysis: principles and concepts of risk analysis, risk assessment approaches, management, communication.
7. **Subspecialty Population Medicine, Subcluster B4:** Quality and food safety assurance systems: application of different case studies to outline principles and applications of pre-harvest, harvest and post-harvest quality management programmes in meat and cheese production (including good manufacturing practice codes, HACCP).
8. **Subspecialty Food Science, Subcluster A1:** Biological hazards in food safety: similar to Core part A1.
9. **Subspecialty Food Science, Subcluster B2:** Food safety risk analysis: application of different case studies and practical examples of ALOP, FSO, PC, PO.
10. **Subspecialty Food Science, Subcluster B4:** Inspection of food of animal origin: risk-based meat inspection.
11. **Subspecialty Food Science, Subcluster C1:** Food quality and control: prerequisites and HACCP procedures through examples of meat/cheese microbiological risk assessments.
12. **Subspecialty Food Science, Subcluster C2:** Food hygiene and technology: meat/dairy technology and interventions in relation to quality, hygiene and safety through examples of meat/cheese microbiological risk assessments

How to register

The course price is £400, with 50% reduction for University of Liverpool residents. Registration can be done here.

The registrations will be treated on a first come, first serve basis and the maximum number of participants is limited to 24. The deadline for the registration is 1st May 2025.

The course is approved and supported by the ECVPH. The first 12 registered residents of the ECVPH will be eligible for reimbursement and can make an individual claim for up to €300 funding. Only Residents who are “in good standing” (residents who have submitted their annual progress report from the previous year) and who do not receive funding from elsewhere for their participation are eligible for funding by the College. The residents must make an individual claim by themselves to the College within 60 days after the course. For more information, please read the Bylaws on the refund of Residents.

For more information about the course, topics, registration, deadlines, etc, please contact Dr Dragan Antic: drantic@liverpool.ac.uk.