

Course Title	Public Health Management				
Course Code	VET-209				
Course Type	Required				
Level	Undergraduate				
Year / Semester	Year 2/ Semester 2 (Spring)				
Teacher's Name	Course Lead: Dr Eleni Michalopoulou Contributors: Prof. Manos Vlasiou, Prof. Costas Constantinou				
ECTS	6	Lectures / week	3	Tutorials / week	2
Course Purpose and Objectives	The main objectives of the course are: <ul style="list-style-type: none"> • To introduce the concept of Veterinary Public Health and develop aspects related to zoonotic disease. • To familiarize students with basic principles of food science • To introduce the significance of official controls associated with Veterinary Epidemiology and Public Health 				
Syllabus and Learning Outcomes	The following list provides the learning objectives that will be covered in the lectures, lab practical sessions and tutorials of each week				
Week 1	Lectures: <ol style="list-style-type: none"> 1. Introduction to Veterinary Public Health 2. Introduction to Food Science 3. Introduction to State Veterinary Medicine Tutorials: Guidance on the module assessment LOBs covered during lectures: Students should be able to: <ul style="list-style-type: none"> • Identify the Public Health significance of different aspects of Veterinary Science and profession. • Identify the different aspects of food science that will be discussed during the course. • Identify aspects of Veterinary Science and profession associated with official controls. 				
Week 2	Lectures: <ol style="list-style-type: none"> 4. Farm to fork, Food chain and associated hazards. 5. Intro to red meat processing operations. 6. Intro to poultry meat processing operations. Tutorials: Case discussion				

	<p>LOBs covered during lectures:</p> <p>Students should be able to:</p> <ul style="list-style-type: none"> • Identify the different stages of production for food of animal origin including transport, slaughter and further processing. • Explain the concept of integrated food safety using examples. • Discuss ethical aspects of meat production and animal welfare. • List mechanisms used as part of IFS • Describe pre-requisites necessary for slaughter including the food chain information (FCI) • Describe how abattoirs and processing plants operate including the slaughter process for different species and the use of prerequisite programmes in meat industry. • Describe the principles of Good Manufacturing Practice (GMP), Good Hygiene Practice (GHP) and personal hygiene and the consumer hazards associated with malpractices/ faults pre-and post -processing. • Describe the process of slaughter and dressing of main meat animals. • Describe the role of the Veterinary profession as part of the ISF.
<p>Week 3</p>	<p>Lectures:</p> <ol style="list-style-type: none"> 7. Food Science. 8. Food microbiology: Microbial behaviour in food and factors in foods used to control microbial growth. 9. Food technology <p>Tutorials:</p> <p>Case discussion</p> <p>LOBs covered during lectures:</p> <p>Students should be able to:</p> <ul style="list-style-type: none"> • Identify the factors in food that affect processing and safety. • Describe the role of food microbiology in food preservation and processing. • Identify the factors in foods used to control growth of specific foodborne pathogen. • Describe the standards and procedures that protect consumer health and secure food trade. • Explain how different methods contribute to meat preservation.

<p>Week 4</p>	<p>Lectures:</p> <ol style="list-style-type: none"> 10. Foodborne pathogens 1 11. Foodborne pathogens 2 12. Foodborne pathogens 3 <p>Tutorials:</p> <p>Lab demonstration</p> <p>LOBs covered during lectures:</p> <p>Students should be able to:</p> <ul style="list-style-type: none"> • Describe characteristics of the main foodborne pathogens and associated diseases • Describe the main control measures for these pathogens in the food chain. • Describe the importance of the meat chain and the likely mechanism of exposure to the main foodborne pathogens at different points in the chain.
<p>Week 5</p>	<p>Lectures:</p> <ol style="list-style-type: none"> 13. Human Foodborne disease 14. Foodborne disease surveillance 15. Foodborne disease investigation <p>Tutorials:</p> <p>Case discussion</p> <p>LOBs covered during lectures:</p> <p>Students should be able to:</p> <ul style="list-style-type: none"> • Identify the main livestock sources of major bacterial foodborne pathogens. • Describe the major methods of isolation and typing of these pathogens. • Explain the basis of controls in livestock production, slaughter and processing. • Appraise how legislation may underpin control strategies. • Describe the surveillance systems for foodborne pathogens. • Identify the main steps in foodborne outbreak investigation. • Describe different microbiological techniques to isolate and determine the possible bacterial cause of a foodborne outbreak. • Use the information provided from case control study to determine the likely source for a foodborne outbreak.
<p>Week 6</p>	<p>Lectures:</p> <ol style="list-style-type: none"> 16. Enteric infections of farm animals: control of Salmonella and Campylobacter in the food chain 17. Prion associated diseases. 18. Endemic Animal Zoonoses

	<p>Tutorials: Case discussion</p> <p>LOBs covered during lectures: Students should be able to:</p> <ul style="list-style-type: none"> • Understand the major features of the key foodborne pathogens and current surveillance. • Understand how controls have been successful in the control of avian salmonellosis and a substantial reduction in human cases. • Be able to describe how controls can prevent transmission or reduce host susceptibility. • Be able to apply the principles of Salmonella control to other zoonotic and non-zoonotic pathogens.
<p>Week 7</p>	<p>Lectures: 19. Eggs 20. Honey 21. Milk and Dairy</p> <p>Tutorials: Lab demonstration</p> <p>LOBs covered during lectures: Students should be able to:</p> <ul style="list-style-type: none"> • Explain the public health concerns in honey consumption. • Describe the EU requirements in honey production and labelling. • Describe the honey production process. • Identify different bee disease agents. • Recognise different types of honey. • Discuss public health hazards associated with bees and honey. • Describe the structure of eggs and the production systems. • Discuss public health issues related to eggs. • Discuss egg handling problem areas and processing. • Recognise the controls on eggs and sales. • Identify the different types of eggs according to production system. • Identify the different categories of eggs according to legal classification. • Assess the quality of eggs based on age, shape and contents. • Identify the basic egg defects
<p>Week 8</p>	<p>Lectures: 22. Companion animal zoonoses</p>

	<p>23. Rabies an example</p> <p>Tutorials: Case discussion</p> <p>LOBs covered during lectures: Students should be able to:</p> <ul style="list-style-type: none"> • Describe the common zoonotic pathogens (bacterial fungal, viral, parasitic) associated with companion animals. • Explain how the pathogens can be transferred to humans. • Discuss and evaluate the different control measures available to reduce the risks of pathogen spread. • Describe the role of pets, wildlife, bats, and urban issues related to lyssaviruses. • Explain the epidemiology and pathogenesis of rabies. • Describe the clinical signs and diagnosis of rabies in animals. • Describe an overview of control strategies for rabies in the EU.
<p>Week 9</p>	<p>Lectures: 24. Water and Public Health 25. Aquaculture and Public Health 1 26. Aquaculture and Public Health 2</p> <p>Tutorials: Lab demonstration</p> <p>LOBs covered during lectures: Students should be able to:</p> <ul style="list-style-type: none"> • Describe the importance of aquaculture and aquatic environment at national and international level. • Describe the different types of aquaculture and aquatic environment exploitation • List important aquaculture diseases • Categorise the human health issues associated with aquaculture. • List the hazards from eating aquatic products such as biological toxins, food poisoning organisms, pollutants (heavy metals, PCBs, dioxins, pesticides), parasites and bacterial zoonosis.
<p>Week 10</p>	<p>Lectures: 27. Companion animals and Public Health beyond Zoonoses 28. Animals in Medicine 29. Introduction to Cultural diversity</p> <p>Tutorials:</p>

	Case Discussion LOBs covered during lectures: Students should be able to: <ul style="list-style-type: none"> • Identify the areas where companion animals contribute to human health and welfare. • Discuss the use of animals in Human Medicine 		
Week 11	Lectures: 30. Cultural and diversity competence in the veterinary work environment I 31. Cultural and diversity competence in the veterinary work environment II Tutorials: Case Discussion (3 hours) LOBs covered during lectures: Students should be able to: <ul style="list-style-type: none"> • Identify the areas where companion animals contribute to human health and welfare. • Discuss the use of animals in Human Medicine 		
Week 12	Revision		
Prerequisites	None	Required	None
Course Content	Lecture Topics: Veterinary Public Health, Food Science, Foodborne Disease, Animals in Public Health		
Teaching Methodology	Lecture based learning and small group tutorials sessions		
Bibliography	<ol style="list-style-type: none"> 1. Buncic, S. (2006). <u>Integrated Food Safety and Veterinary Public Health</u>, CABI Pub. 2. Yamada, A., et al. (2016). <u>Confronting Emerging Zoonoses: The One Health Paradigm</u>, Springer Japan. 3. Smulders, F. J. M. and J. D. Collins (2002). <u>Food Safety Assurance and Veterinary Public Health</u>, Wageningen Academic Publishers. 		
Assessment	Course assignment 30% and final exam 60%, Attendance 10%		
Language	English		