

Course Title	<b>Animal Welfare and Behavior</b>				
Course Code	<b>VET-205</b>				
Course Type	Required				
Level	Undergraduate				
Year / Semester	Year 2/ Semester 1 (Fall)				
Teacher's Name	<b>Course Lead:</b> Dr Vasilis Symeou				
ECTS	6	Lectures / week	3	Tutorials / week	2
Course Purpose and Objectives	<p>The main objectives of the course are:</p> <ul style="list-style-type: none"> <li>• To give students an introduction to the animal welfare and welfare concepts, the different definitions of animal welfare and understand how they relate to an animal's 'needs and wants' in relation to homeostasis, stressors, agency and FAWCs Five Freedoms</li> <li>• To help students explore the laboratory animal welfare and principles of animal ethics.</li> <li>• To let students discuss and provide examples of welfare issues of companion animals associated with breeding (including genetic/breed problems), overproduction and behavioral problems</li> <li>• To give students a deeper understanding of farm animal welfare</li> <li>• To let students understand the effect of stressors on homeostasis (stress), the 'cost of coping' and 'the general adaptive response', including challenges from nutrition, environment, health and behavioral stressors</li> <li>• To discuss different methodologies that are used to determine how the needs and preferences of animals can be ascertained.</li> </ul>				
Learning Outcomes	<p>The following list provides the learning objectives that will be covered in the lectures, lab practical sessions and tutorials of each week:</p> <p><a href="#">Week 1</a></p> <p><b>LOBs covered during lectures:</b></p> <ol style="list-style-type: none"> <li>1. Give a brief history of attitudes towards animals</li> <li>2. Describe the concept of animal welfare</li> <li>3. Explain the increased concern for animal welfare</li> <li>4. Name the influence of culture, socio-economic background, and urbanization.</li> <li>5. Discuss the role of the media in influencing public attitudes to animals and animal issues.</li> </ol>				

**Week 2****LOBs covered during lectures:**

6. Appreciate the context of animal welfare assessment in relation to legal, professional and ethical obligations
7. Discuss our obligations to animals: do they have rights?
8. Provide examples of physiological and anatomical changes in animals associated with good and poor welfare and when they might be seen
9. Provide examples of behavioral changes in animals associated with good and poor welfare including examples of abnormal behavior and why they occur
10. Discuss the link between the concepts of animal welfare theory and their role in practical welfare assessment

**Week 3****LOBs covered during lectures:**

11. Discuss the domestication of farm animal species
12. Discuss different farming methods and farming of different animal species
13. Discuss consumer awareness and attitudes
14. Give examples of concerns in relation to the keeping of different farm animal species

**Week 4****LOBs covered during lectures:**

15. Explain what are unloading areas
16. Explain holding pens and alleys
17. Describe stunning area, restraining systems, and stun box
18. Discuss stunning and slaughter
19. Discuss the importance of the staff and their training

**Week 5****LOBs covered during lectures:**

20. Discuss the definition of animal experiment
21. Name the areas of animal experimentation
22. Explain the three RS concept
23. Name the ethical and welfare principles in legislation of animal research
24. Discuss the ethical decisions with regard to animal experiments
25. Describe the ethical evaluation of animal experiments: theory and practice

**Week 6****LOBs covered during lectures:**

26. Explain the role of animal testing in product safety
27. Discuss the cosmetics directive and its 7th amendment

28. Describe the protection of Animals acts
29. Explain the legislation on animal welfare
30. Describe the legal protection of animals used in experimentation
31. Discuss the transport legislation and guidelines
32. Discuss the veterinary surgeon as expert witness in animal welfare cases

#### Week 7

##### **LOBs covered during lectures:**

33. Explain what is biotechnology
34. Describe the development of biotechnology
35. Discuss the potential effects on animal welfare
36. Discuss the challenges of animal biotechnology

#### Week 8

##### **LOBs covered during lectures:**

37. Discuss the growing importance of pet and companion animals
38. Discuss and provide examples of welfare issues in of companion animals associated with breeding (including genetic/breed problems), overproduction and behavioral problems
39. Discuss the potential welfare issues associated with the sale of companion animals
40. Discuss and provide examples of the welfare problems that arise from lack of knowledge of owners resulting from inappropriate diets, housing, health care and understanding of behavior in companion species and why they occur.
41. Appreciate the potential risks to health and welfare associated with 'companion animal rescue centers
42. Explain the potential adverse impacts on welfare of the differing lifestyles associated with the differing uses of companion animals of the same species (including mutilations)

#### Week 9

##### **LOBs covered during lectures:**

43. Describe the measurement of stress responses
44. Discuss the immune system function and welfare.
45. Describe the pathological effects of stress.
46. Describe the relationships between welfare indicators.
47. Explain the use of a range of methods in combination to assess welfare
48. Discuss the strengths and weaknesses of available techniques for assessing welfare in individual animals
49. Explain the difference between assessment methodologies looking at inputs (resources and

management) and animal-based measures and the problems of using 'productivity' as a sole methodology

50. Discuss examples of systems used at the practical level to assess welfare of individual animals and/or production and animal management systems

#### Week 10

##### **LOBs covered during lectures:**

51. Appreciate the major environmental and management factors influencing the welfare of farmed pigs including issues associated with housing, nutrition, social grouping and husbandry procedures
52. Know how to assess the welfare of sheep at grass and when housed and be aware of the impact of husbandry procedures on sheep welfare and of possible mitigating measures
53. Appreciate the major environmental and management factors influencing the welfare of farmed cattle including issues associated with housing, nutrition, social grouping and husbandry procedures
54. Discuss the requirements of cattle for physical comfort and how this influences animal welfare, health and productivity
55. Describe how different housing features influence different types of lameness and mastitis
56. Appreciate the major environmental and management factors influencing the welfare of farmed poultry including issues associated with housing, nutrition, social grouping and husbandry procedures
57. Discuss Chickens kept for meat production (broilers)
58. Discuss Laying hens

#### Week 11

##### **LOBs covered during lectures:**

59. Describe, justify, and discuss how to recognize both good and poor welfare conditions under which horses are kept, assess the welfare of individual horses, and how these might be communicated to owners
60. Discuss the impacts on the welfare of horses and donkeys used for different purposes/activities
61. Understanding of how to ease the stresses of transportation of horses
62. Discuss the environmental, behavioral and management needs of the animal and animal keeper in the provision of optimal housing for captive wild animals (zoo animals)
63. Describe why the issues occur, how they affect captive wild animal welfare and what measures can be taken to mitigate them

#### Week 12

	<p><b>LOBs covered during lectures:</b></p> <p>64. Discuss the legal consequences of animals as ‘property’ in law, of the responsibilities of ownership for owners and those in control of animals</p> <p>65. Give an overview of the main statutory animal welfare protection legislation in relation to the protection of vertebrate animals depending on their human utility</p> <p>66. Discuss what type of animals are protected under the Animal Welfare Act (AWA) 2006 (as devolved) and who is legally liable for their welfare</p> <p>67. Discuss the role of primary and secondary legislation and the role of ‘codes of practice’ in relation to animal welfare protection under the AWA 2006</p> <p>68. Discuss the legal requirement to avoid ‘un-necessary suffering’ and the provision for protection afforded by section 18 of the AWA</p> <p>69. Discuss the concept of ‘mutilation’ particularly with reference to the role of the veterinary surgeon in animal management</p> <p>70. Apply this knowledge to different scenarios involving welfare challenges to protected animals.</p>		
Prerequisites	None	Required	None
Course Content	<p><b>Lecture Topics:</b></p> <ul style="list-style-type: none"> <li>● <b>Human–Animal Relationships (Historical and Contemporary):</b> learn about influence of culture, social economic background, and urbanization. Also know what is the role of the media for influencing public attitudes to animal and animal issues.</li> <li>● <b>Companion Animal Welfare Issues:</b> learn about the cruelty, neglect and behavioral problems. Discuss and review studies, comparing different kennel and cattery designs and management systems, stray animals, shelter animals.</li> <li>● <b>Farming and Rearing:</b> Gather knowledge about domestication of farm animal species. Explain methods of different farming of different animal species. Consumer awareness and attitudes. Examples of concern in relation to the keeping of different farm animal species. Laying hens and farrowing and lactating sows.</li> <li>● <b>Slaughter Guidelines for Red Meat:</b> Explain the areas of unloading, Holding pens and alleys. Discuss the stunning area, restraining system and stun box, the stunning and slaughter, staff and training.</li> <li>● <b>Slaughter Guidelines for Poultry:</b> Explain the areas of unloading. Handling of live birds. Discuss the stunning and slaughter, staff and training.</li> <li>● <b>Animal Experimentation:</b> learn about definition and areas of animal experimental. Knowledge about three RS concept.</li> </ul>		

	<p>Ethical and welfare principles in legislation on animal research. Ethical decisions with regard to animal experiments. Ethical evaluation of animal experiments: theory and practice.</p> <ul style="list-style-type: none"> <li>● <b>Product Safety-Related Aspects of Animal Testing:</b> The role of animal testing in product safety. The cosmetics directive and its 7th amendment</li> <li>● <b>Legislation Protecting All Domesticated Species:</b> Explain about the Protection of Animals Acts. What is the legislation on animal welfare? How to used Legal protection of animals in experimentation. What is the transport of legislation and guidelines? Gather knowledge about the veterinary surgeon as expert witness in animal welfare cases.</li> <li>● <b>Animal Biotechnology and Animal Welfare:</b> What is animal biotechnology? Discuss the potential effects on animal welfare.</li> <li>● <b>Pet animals: Housing, Breeding and Welfare:</b> Explain the growing importance of pet and companion animals. Find out the animal welfare problems in housing of pet animals and problems in breeding of pet animals. Gather Information and education on housing of pet animals. Research housing and breeding of pet animals.</li> <li>● <b>Physiological Indicators of Welfare:</b> Measurement of stress responses. Immune system function and welfare. Pathological effects of stress. Relationships between welfare indicators. Using a range of methods in combination to assess welfare</li> <li>● <b>Understanding of Environmental Factors Affecting Welfare:</b> Discuss the Pen design, stocking density, safety aspects, building design. Explain the methods of assessing and improving environments.</li> <li>● <b>Introduction to Welfare Assessment- Behavior:</b> Explain the methods of study. What are functional systems of behavior: social, feeding, hazard avoidance, body maintenance and implications for welfare.</li> <li>● <b>Motivational Investigations in the Assessment of Welfare:</b> What is Preference testing and Operant testing. How to measure aversion.</li> </ul>
Teaching Methodology	Lecture based learning and small group tutorials
Bibliography	<ol style="list-style-type: none"> <li>1. <a href="#">Management and welfare of farm animals. The UFAW farm handbook.</a></li> <li>2. <a href="#">Animal Welfare. M.C. Appleby and B.O. Hughes.</a></li> <li>3. <a href="#">MDC/AHDB publications (dairy and beef cattle).</a></li> <li>4. <a href="#">Animal welfare</a></li> <li>5. <a href="#">Animal Law: Welfare Interests and Rights</a></li> </ol>

	6. <a href="#">The Sciences of Animal Welfare (Universities Federation for Animal Welfare)</a>
Assessment	Course assignment 30%; Participation 10%; and Final exam 60%
Language	English