

Course Title	<b>Poultry and Fish medicine</b>				
Course Code	<b>Vet-405</b>				
Course Type	Required				
Level	Undergraduate				
Year / Semester	Year 4/ Semester 1 (Fall)				
Teacher's Name	<b>Course Lead:</b>  <b>Contributor:</b>				
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 teach the students about the common and rarer diseases found in all species of poultry including chickens, ducks, turkeys, and game birds. We will focus on the epidemiological, clinical signs, differential diagnosis, pathogenesis treatment and control of each disease.</li> <li>• To teach the students disease prevention and treatment, methodologies of identifying and addressing fish disease risk along with preventative and responsive insights to the challenges impacting fish production today. The students will learn how both specific (vaccination) and non-specific (immunostimulation) approaches are explored, and learn about maintaining optimal environmental conditions, to understanding how stressors in fish affect their immune system</li> </ul>				

Learning  
Outcomes

The following list provides the learning objectives that will be covered in the lectures, lab practical sessions and tutorials of each week:

**Poultry medicine****Week 1****LOBs covered during lectures:**

1. The poultry industry- world scene
2. Global poultry meat production and consumption
3. Egg production and consumption
4. The role of breeding companies
5. The role of the veterinarian
6. How to carry out a field investigation

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

7. Laboratory investigation to support health programs and disease diagnosis
8. Biosecurity in poultry management
9. Veterinary health and welfare planning
10. Vaccines and vaccination
11. Classes of medicines used in poultry
12. Mechanisms of disease transmission
13. Nutrition of chickens and dietary deficiencies

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

Describe the etiology, occurrence, and economic significance, transmission, clinical signs, pathology, diagnosis and confirmation and prevention of the following poultry diseases:

**Immunosuppressive diseases:**

14. Marek's disease
15. Infectious bursal disease
16. Chicken anemia

**Respiratory diseases:**

17. Newcastle disease
18. Infectious laryngotracheitis
19. Avian influenza
20. Infectious bronchitis
21. Mycoplasmosis
22. Coryza
23. Aspergillosis

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

24. Swollen head syndrome
25. Septicemia and airsacculitis

**Systemic diseases:**

26. Salmonellosis-pullorum disease
27. Salmonellosis-fowl typhoid
28. Salmonellosis-paratyphoid
29. Pasteurellosis
30. Spirochetosis
31. Avian encephalomyelitis
32. Adenoviral infections
33. Egg drop syndrome
34. Runting syndrome

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

35. Coccidiosis
36. Clostridial enterotoxemia

**Endoparasites:**

37. Capillariasis
38. Ascariasis
39. Cestodiasis

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

40. Skeletal deformities and arthritis
41. Nutritional etiology
42. Infectious etiology
43. Mycoplasmosis
44. Reoviral arthritis
45. Staphylococcal arthritis
46. Pododermatitis
47. Twisted legs
48. Rotated tibia and crooked toes

**Week 7****LOBs covered during lectures:**

**Integumentary conditions**

49. Avian pox
50. Ectoparasites
51. Mites
52. Argasid ticks
53. Scaly leg mites
54. Lice
55. Treatment

**Week 8****LOBs covered during lectures:****Miscellaneous conditions:**

56. Dermatomycosis
57. Mycotoxicoses
58. Leucocytozoonosis

**Diseases of the waterfowl:**

59. Duck viral enteritis
60. Duck viral hepatitis
61. Duckling septicemia
62. Chlamydiosis
63. Annexures

**Week 9****LOBs covered during lectures:**

64. Practical epidemiology of poultry disease and multi-factorial conditions
65. Nutritional disorders
66. Management as a cause of disease in poultry
67. Toxicants in poultry
68. Diseases of gamebirds

**Week 10****LOBs covered during lectures:****Fish Medicine**

69. Immunology: Improvement of Innate and Adaptive Immunity
70. Teleost Immunity
71. Effectors of the Immune Response
72. Improvement of the Immune Response
73. Improvement of Disease Resistance by Genetic Methods
74. How to Assess Disease Resistance in Fish?
75. Basic Genetic Principles
76. Selective Breeding to Improve Resistance
77. Application of New Biotechnologies

	<p><a href="#">Week 11</a></p> <p><b>LOBs covered during lectures:</b></p> <p>78. Types of Pathogens in Fish, Waterborne Diseases          79. Host Specificity of Pathogens          80. Viral Pathogens          81. Transmission of Fungal Disease: the Water Molds          82. Parasite Transmission          83. Prophylactic and Prevention Methods Against Diseases in Aquaculture          84. General Disease Prevention and Control Methods          85. Integrated Pathogen Management Strategies in Fish Farming          86. Diagnostic Tools, the Key for Identification and Monitoring of Pathogens          87. Prevention Strategies in Fish Farming          88. Treatment Strategies in Fish Farming</p> <p><a href="#">Week 12</a></p> <p><b>LOBs covered during lectures:</b></p> <p>89. General Relationship Between Water Quality and Aquaculture Performance in Ponds          90. Water Quality–Aquatic Animal Health Interactions          91. Water-Quality Management          92. Toxic Algae          93. Water Quality–Disease Relationship on Commercial Fish Farms          94. Water Temperature, PH, Oxygen, Ammonia, nitrite, chlorine          95. Stress and Disease in Fish          96. Fish Transportation          97. Vaccination</p>		
Prerequisites	None	Required	None
Course Content	<p><b>Poultry medicine:</b></p> <ul style="list-style-type: none"> <li>• The poultry industry</li> <li>• Laboratory diagnosis</li> <li>• Biosecurity</li> <li>• Medications</li> <li>• Bacterial diseases</li> <li>• Viral diseases</li> <li>• Fungal diseases</li> <li>• Parasitic diseases</li> <li>• Diseases of body systems</li> <li>• Poisons and toxins</li> </ul>		

	<p><b>Fish medicine</b></p> <ul style="list-style-type: none"> <li>• Immunology in fish</li> <li>• Disease resistance</li> <li>• Viral pathogens</li> <li>• Fungal disease</li> <li>• Disease transmission</li> <li>• Prophylactic and prevention methods</li> <li>• Pathogen management strategies</li> <li>• Diagnostic tools</li> <li>• Prevention and treatment</li> <li>• Water quality</li> <li>• Stress and disease in fish</li> </ul>
Teaching Methodology	Lecture based teaching and small group tutorials
Bibliography	<ol style="list-style-type: none"> <li>1. <u><a href="#">Poultry Diseases, 6th, Pattison</a></u></li> <li>2. <u><a href="#">Poultry Diseases, A Colour Atlas of Poultry Diseases</a></u></li> <li>3. <u><a href="#">Fish diseases, 1st, Jeney</a></u></li> </ol>
Assessment	Final written Exam 100%
Language	English