

Course Title	<b>Systems Medicine III</b>				
Course Code	<b>VET-401</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	Practical sessions and tutorials / week
Course Purpose and Objectives	<p><b>The main objectives of the course are:</b></p> <ul style="list-style-type: none"> <li>• <b>Haematology</b> In this section of the course the students learn to assess and diagnose the blood diseases of small animals, select the relevant diagnostic test, interpret the results and determine the clinical significance and therapy</li> <li>• <b>Immune mediated diseases</b> in this section of the course the students learn the pathogenesis diagnostic testing and treatment of common immune mediated disease</li> <li>• <b>Oncology</b> Students learn the principles of oncogenesis in veterinary medicine, discussing selected tumours in small animals in detail, and addressing cancer diagnostics and therapy</li> <li>• <b>Ophthalmology</b> To expose the student to the t basic elements of ophthalmic science relevant to study and practice, the course includes description and discussion of each condition including etiology, clinical signs, diagnosis, prognosis, and therapy.</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> <p><b>Haematology</b></p> <ol style="list-style-type: none"> <li>1. Anaemia</li> <li>2. Clinical and clinicopathological evaluation</li> <li>3. Principles of management of the anaemic patient</li> <li>4. Regenerative anaemias</li> <li>5. Nonregenerative anaemias</li> <li>6. Principles of transfusion therapy</li> <li>7. Erythrocytosis</li> <li>8. Leukopenia and leukocytosis</li> </ol> <p><a href="#">Week 2</a></p> <p><b>LOBs covered during lectures:</b></p> <ol style="list-style-type: none"> <li>9. Disorders of haemostasis</li> </ol>				

10. Management of the bleeding patient
11. Disseminated intravascular coagulation
12. Primary haemostatic defects
13. Secondary haemostatic defects
14. Lymphadenopathy and splenomegaly
15. Hyperproteinemia
16. Fever of undetermined origin

#### Week 3

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

##### **Immune mediated disorders**

17. Pathogenesis of immune mediated disorders
18. Diagnostic testing for immune mediated disease
19. Treatment of primary immune mediated disease
20. Immune mediated haemolytic anaemia
21. Immune mediated thrombocytopenia
22. Immune mediated neutropenia
23. Polyarthritis
24. Systemic lupus erythematosus
25. Glomerulonephritis
26. Acquired myasthenia gravis
27. Immune mediated myositis

#### Week 4

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

##### **Oncology**

28. Cytologic characteristics of malignant neoplasm
29. Treatment options for animals with cancer
30. Practical chemotherapy
31. Complications of cancer chemotherapy
32. Approach to the patient with a mass
33. Approach to the cat or dog with metastatic lesions

#### Week 5

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

34. Lymphoma
35. Leukaemias- definition and classification
36. Leukaemias in dogs
37. Leukaemias in cats
38. Haemangiosarcoma in dogs
39. Osteosarcoma
40. Mast cell tumours in dogs and cats
41. Adenocarcinoma
42. Squamous cell carcinoma

#### Week 6

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

43. Chondrosarcoma
44. Fibrosarcoma
45. Haemangiosarcoma
46. Lipoma
47. Mammary gland tumours

	<p>48. Mast cell tumours  49. Melanoma  50. Sertoli cell tumour  51. Malignant histiocytoma  52. Paraneoplastic syndrome</p> <p><a href="#">Week 7</a></p> <p><b>LOBs covered during lectures:</b></p> <p><b>Ophthalmology</b></p> <p>53. Examination of the eye and its adnexa  54. Diagnostics and therapeutics for eye diseases  55. Ocular emergencies  56. Luxation or proptosis of the globe  57. Chemical burns  58. Blunt trauma  59. Penetrating or perforating trauma  60. Enophthalmos/exophthalmos</p> <p><a href="#">Week 8</a></p> <p><b>LOBs covered during lectures:</b></p> <p>61. Keratoconjunctivitis sicca  62. Distichiasis  63. Entropion  64. Ectropion  65. Trichiasis  66. Blepharitis  67. Neoplasia of the eye lid  68. Ectopic cilia  69. Protrusion of the nictitating membrane  70. Eversion/inversion of the nictitating membrane  71. Hyperplasia/hypertrophy of the gland of the nictitating membrane</p> <p><a href="#">Week 9</a></p> <p><b>LOBs covered during lectures:</b></p> <p>72. Conjunctivitis  73. Nystagmus  74. Keratitis  75. Dystrophic/degenerative deposits in the cornea  76. Glaucoma  77. Hyphaema  78. Uveitis  79. Horner's syndrome  80. Cataract  81. Lens luxation  82. Retinal dysplasia</p>		
Prerequisites	Systems Medicine I & II	Required	None
Course Content	<ul style="list-style-type: none"> <li>• <b>Haematology</b> Haematological procedures, haematopoiesis, evaluation of erythrocytes, evaluation of leukocytic disorders, evaluation of haemostasis- coagulation and platelet disorders.</li> </ul>		

	<ul style="list-style-type: none"> <li>• <b>Immune mediated diseases</b> pathogenesis, various diagnostic testing, treatment and common small animal immune mediated diseases</li> <li>• <b>Oncology</b> cytology, selected neoplasms in dogs and cats, principles of cancer treatment, chemotherapy and its complications, approach to a patient with a mass.</li> <li>• <b>Ophthalmology</b> Anamnesis and the Ocular Examination. Ophthalmic Pharmacology. Problem-Based Management of Ocular Emergencies. Neuro-Ophthalmic Disorders. Principles of Ophthalmic Surgery. Orbit and Globe. Eyelids. Conjunctiva and Third Eyelid. Lacrimal Apparatus. Cornea and Sclera. Anterior Uvea and Anterior Chamber. Glaucoma. Lens. Vitreous and Ocular Fundus. Presumed Inherited Ocular Diseases.</li> </ul>																																										
Teaching Methodology	Lecture based learning small group practical sessions for each thematic area																																										
Bibliography	<table border="1"> <thead> <tr> <th data-bbox="502 882 694 960">Authors</th> <th data-bbox="694 882 904 960">Title</th> <th data-bbox="904 882 1018 960">Edition</th> <th data-bbox="1018 882 1171 960">Publisher</th> <th data-bbox="1171 882 1297 960">Year</th> <th data-bbox="1297 882 1437 960">ISBN</th> </tr> </thead> <tbody> <tr> <td data-bbox="502 960 694 1106">Richard W. Nelson, C. Guillermo Couto</td> <td data-bbox="694 960 904 1106">Small Animal Internal Medicine</td> <td data-bbox="904 960 1018 1106">6th</td> <td data-bbox="1018 960 1171 1106">Elsevier</td> <td data-bbox="1171 960 1297 1106">2019</td> <td data-bbox="1297 960 1437 1106">978-0323676946</td> </tr> <tr> <td data-bbox="502 1106 694 1279">Stephen J. Ettinger</td> <td data-bbox="694 1106 904 1279">Textbook of Veterinary Internal Medicine Expert Consult</td> <td data-bbox="904 1106 1018 1279">8th</td> <td data-bbox="1018 1106 1171 1279">Saunders</td> <td data-bbox="1171 1106 1297 1279">2016</td> <td data-bbox="1297 1106 1437 1279">978-0323312110</td> </tr> <tr> <td data-bbox="502 1279 694 1451">Jean-Pierre Lavoie</td> <td data-bbox="694 1279 904 1451">Blackwell's Five-Minute Veterinary Consult: Equine</td> <td data-bbox="904 1279 1018 1451">3rd</td> <td data-bbox="1018 1279 1171 1451">Wiley-Blackwell</td> <td data-bbox="1171 1279 1297 1451">2019</td> <td data-bbox="1297 1279 1437 1451">978-1119190219</td> </tr> <tr> <td data-bbox="502 1451 694 1644">Larry P. Tilley, Francis W.K. Smith</td> <td data-bbox="694 1451 904 1644">Blackwell's Five-Minute Veterinary Consult: Canine &amp; Feline</td> <td data-bbox="904 1451 1018 1644">6th</td> <td data-bbox="1018 1451 1171 1644">Wiley-Blackwell</td> <td data-bbox="1171 1451 1297 1644">2015</td> <td data-bbox="1297 1451 1437 1644">978-1118881576</td> </tr> <tr> <td data-bbox="502 1644 694 1816">Christopher Chase</td> <td data-bbox="694 1644 904 1816">Blackwell's Five-Minute Veterinary Consult: Ruminant</td> <td data-bbox="904 1644 1018 1816">2nd</td> <td data-bbox="1018 1644 1171 1816">Wiley-Blackwell</td> <td data-bbox="1171 1644 1297 1816">2017</td> <td data-bbox="1297 1644 1437 1816">978-1119064688</td> </tr> <tr> <td data-bbox="502 1816 694 1984">C. Stades, Milton Wyman, Michael H. Boeve</td> <td data-bbox="694 1816 904 1984">Ophthalmology for the Veterinary Practitioner</td> <td data-bbox="904 1816 1018 1984"></td> <td data-bbox="1018 1816 1171 1984">Schluetersche</td> <td data-bbox="1171 1816 1297 1984">2007</td> <td data-bbox="1297 1816 1437 1984">978-3899930115</td> </tr> </tbody> </table>	Authors	Title	Edition	Publisher	Year	ISBN	Richard W. Nelson, C. Guillermo Couto	Small Animal Internal Medicine	6th	Elsevier	2019	978-0323676946	Stephen J. Ettinger	Textbook of Veterinary Internal Medicine Expert Consult	8th	Saunders	2016	978-0323312110	Jean-Pierre Lavoie	Blackwell's Five-Minute Veterinary Consult: Equine	3rd	Wiley-Blackwell	2019	978-1119190219	Larry P. Tilley, Francis W.K. Smith	Blackwell's Five-Minute Veterinary Consult: Canine & Feline	6th	Wiley-Blackwell	2015	978-1118881576	Christopher Chase	Blackwell's Five-Minute Veterinary Consult: Ruminant	2nd	Wiley-Blackwell	2017	978-1119064688	C. Stades, Milton Wyman, Michael H. Boeve	Ophthalmology for the Veterinary Practitioner		Schluetersche	2007	978-3899930115
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Assessment	Final written exam 100%
Language	English