

Module title:	Clinical haematology	ECTS	1
Polish translation:	Hematologia Kliniczna		
Course:	Veterinary Medicine		

Module language: English		Stage: JM-FVM	
Form of studies: <input checked="" type="checkbox"/> intramural <input type="checkbox"/> extramural	Type of module: <input type="checkbox"/> basic <input checked="" type="checkbox"/> directional	<input type="checkbox"/> mandatory <input checked="" type="checkbox"/> elective	Semester: 8 <input type="checkbox"/> winter semester <input checked="" type="checkbox"/> summer semester
Academic year:	2023/2024	Catalogue number:	FVM-V-JMSS-08S-ED02_23

Module coordinator:	Dr Marek Kulka		
Teachers responsible for the module:	Academic teachers of the Institute of Veterinary Medicine; Department of Pathology and Veterinary Diagnostics; PhD students in accordance to the internal legal acts; visiting professors; other specialists in the field of study		
Unit responsible for the module:	Institute of Veterinary Medicine, Department of Pathology and Veterinary Diagnostics		
Faculty in charge:	Faculty of Veterinary Medicine		
Objectives of the module:	<p>Program of the course includes presentation of the most common blood disorders and its association with selected diseases as well as performing the modern hematological examination and treatment due to current knowledge. During the course students will improve their blood work skills (CBC, different types of blood smear staining and its assessment) and analyse the given cases.</p> <p>LECTURE TOPICS: Red blood cells disorders [2 h] Transfusion medicine [1 h] White blood cells and platelets disorders [2 h]</p> <p>LABORATORY CLASSES: Cases - based analyses on current clinical patients [10 h]</p> <p>The content of the lectures supplements the content of the laboratory classes.</p>		
Teaching forms, number of hours:	a) Lectures; hours %; b) Laboratory classes; hours 10;		
Teaching methods:	Multimedia lecture, practical classes. •Methods aimed at teaching practical skills: <ul style="list-style-type: none"> case studies - discussion, medical data analysis, microscopic assessment of body fluids, blood processing. •Consultations (1h/week). Detailed schedule will be defined by the coordinator of the course at the beginning of semester. Detailed organization of consultations will be defined by the coordinator of the course at the beginning of semester.		
Formal prerequisites and initial requirements:	Passing the courses: Clinical and Laboratory Diagnostics, Pharmacology, Parasitology and Invasiology.		
Learning outcomes:	Knowledge: - Student knows primary and secondary blood disorders and its association with selected (i.e. gastrointestinal, endocrinal, neoplastic, parasitic) diseases - Student knows how to do the blood testing (CBC, blood gas, biochemistry panels measurements; different blood smear staining protocols) - Student knows the transfusion medicine and blood processing protocols - Student knows the algorithms in hematological examination - Student knows the specific blood and bone marrow tests used in hematology	Skills: - Student is able to perform, blood tests and interpret the results - Student based on the blood work, diagnostic imaging results (X-ray, US), and patient's clinical symptoms is able to do the hematological examination and propose the differential diagnosis (DDx) - Student is able to propose and interpret additional blood and bone marrow specific testing when needed	Competences: - Student is prepared to formulate opinions and consultations regarding hematological examination of given patient with blood disorder/s - Student is prepared to formulate opinions regarding the treatment based on the hematological examination outcome - Student is able to formulate opinions regarding additional testing etc. and consult the case with other team members to improve the consultation outcome
Assessment methods:	Attendance to the classes is mandatory, student can be absent on 20% of classes or according to the current academic regulations. Written, single choice final test of the acquired practical and theoretical knowledge, 15 questions, 1 point per correct answer. No extra assessment methods are anticipated.		

	In case of unforeseen, unusual circumstances mandatory remote teaching and remote assessment methods might be adopted.
Formal documentation of learning outcomes:	eHMS entry. Records collected in the course portfolio (general rules of the course, individual records of student results, presence lists, database of oral and written questions, written assessments of the students).
Elements impelling final grade:	Final test (100%), graded as following: 0-7 points – failed, 8-9 points sufficient, 10-11 sufficient +, 12-13 good, 14 good +, 15 very good
Teaching base:	Lecture facilities and laboratories of the Faculty of Veterinary Medicine
Mandatory and supportive materials :	
1. Nelson Small animal internal medicine, Richard Nelson C. Guillermo Couto, 2019	
2. Blackwell's Five-Minute Veterinary Consult: Canine and Feline, Larry P. Tilley , Francis W. K. Smith Jr, 2015	
3. Schalm's Veterinary Hematology, Douglas J. Weiss (Editor), K. Jane Wardrop (Editor), 2010	
4. Relevant scientific publications, including those of the module coordinator.	
ANNOTATIONS -	

Quantitative summary of the module:

Estimated number of work hours per student (contact and self-study) essential to achieve presumed learning outcomes of the module - base for quantifying ECTS:	24 h
Total ECTS points, accumulated by students during contact learning:	1 ECTS

Learning outcomes of the module relative to the learning outcomes of the subject:

Outcome category	Learning outcomes:	Learning outcomes relative to the course outcomes	Impact on the each course outcomes
Knowledge -	- Student knows primary and secondary blood disorders and its association with selected (i.e. gastrointestinal, endocrinal, neoplastic, parasitic) diseases	A.W.10, A.W.11, A.W.12, B.W.2, B.W.3	3
Knowledge -	- Student knows how to do the blood testing (CBC, blood smear staining, blood gas, basic biochemistry measurements)	B.W.4, B.W.6	3
Knowledge -	- Student knows the transfusion medicine and blood processing protocols	B.W.3, B.W.9, B.W.4	2
Knowledge -	- Student knows the algorithms in hematological examination	B.W.4, B.W.6, B.W.15	3
Knowledge -	- Student knows the specific blood and bone marrow tests used in hematology	B.W.4, B.W.6	3
Skills -	- Student is able to perform, blood tests and interpretate the results	A.U.8, B.U.6	2
Skills -	- Student based on the blood work, diagnostic imaging results (X-ray, US), and patient's clinical symptoms is able to do the hematological examination and propose the differential diagnosis (DDx)	B.U.2, B.U.10, B.U.13, B.U.20	3
Skills -	- Student is able to propose and interpretate additional blood and bone marrow specific testing when needed	A.U.2, B.U.6	2
Competences -	- Student is prepared to formulate opinions and consultations regarding hematological examination of given patient with blood disorder/s	KS.1, KS.5	3
Competences -	- Student is prepared to formulate opinions regarding the treatment based on the hematological examination outcome	KS.1, KS.5, KS.10	3
Competences -	- Student is able to formulate opinions regarding additional testing etc. and consult the case with other team members to improve the consultation outcome	KS.1, KS.3, KS.4, KS.8, KS.9, KS.10	3