Module title:	Clinical toxicology of small animals	**ECTS**	**1**
Polish translation:	Toksykologia kliniczna małych zwierząt		
Course:	**Veterinary Medicine**		

Module language: English			Stage: JM-FVM		
Form of studies: ☑ intramural ☐ extramural	Type of module: ☐ basic ☐ mandatory ☑ directional ☑ elective		Semester: 9		☑ winter semester ☐ summer semester
		Academic year:	**Intake 2020/2021**	Catalogue number:	**FVM-V-JMSS-09W-ED02_20**

Module coordinator:	**dr hab. Marta Mendel, prof. SGGW**
Teachers responsible for the module:	**Academic teachers of the Institute of Veterinary Medicine; Department of Preclinical Sciences. 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 Preclinical Sciences**
Faculty in charge:	**Faculty of Veterinary Medicine**
Objectives of the module:	During the course student acquires detailed information on most common poisonings noticed in small animals (dogs and cats), including prevention, diagnostics and treatment. Lecture content; Introduction to clinical toxicology of dogs and cats; Epidemiology of the most frequent poisonings in dogs and cats; Detailed characteristic of anticoagulant rodenticides (3 hours); Toxicology of other non-anticoagulant rodenticides: cholecalciferol and bromethalin, strychnine (2 hours); Detailed characteristic of metaldehyde intoxication in dogs and cats. Differential diagnostics in neurologic patient (2 hours); Detailed characteristic of poisoning caused by ethylene glycol and other organic solvents in dogs and cats (2 hours); Toxicological significance of house-hold products, narcotics and OTC drugs (2 hours); Detailed characteristics of toxic plants (outdoor and indoor plants) and animals' toxins (2 hours); Toxicology of iron, copper and zinc (intoxications and inherited diseases). (2 hours).
Teaching forms, number of hours:	a) Lectures; hours 15;
Teaching methods:	• Original multimedia presentations prepared by academic teachers which link theoretical knowledge with practical aspects of veterinary profession • Disscusions initiated by the teachers • Videos presenting clinical symptoms of poisonings in cats and dogs • Consultations (7 h in semester) 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: Toxicology

Learning outcomes:			
	Knowledge Student: - knows the most common poisonings reported in dogs and cats, including their causes and manifestations, - knows and understands the diagnostics rules and non-specific and specific therapy protocols used in acute and chronic poisonings, - knows the consequences of incorrect dosing of mineral and phytogenic feed additives in companion animals,	Skills Student: - is able to collect toxicological data, including data specific for individual animal species, - is able to select samples and diagnostic tests to confirm a poisoning, - can chose the most suitable therapy protocol in acute and chronic poisonings, - is able to perform differential diagnostic process in case of poisoning suspicion,	Competences Student: - is prepared to make its mind in a situation of chemical hazard (decide about therapy protocols for affected animals and personal protective equipment for individuals involved), - is prepared to advise animal owner in regards to safe use of mineral and phytogenic feed additives, - is ready to critically interpret the results of laboratory tests in case toxicological analysis.

Assessment methods:

All lectures are obligatory. The attendance at 5 lectures or more will be benefited at the final test.
One verification (written) test at the end of semester – 3 questions for frequent attenders of the lectures or 4 questions for all other students.
To pass the test one must obtain at least 51% of total number of points (at least 8 out of 15 points or 10.5 out of 20 points in case of 3 and 4 questions, respectively).
Grading scale:

3-question test		4-question test	
Number of points:	Grade	Number of points:	Grade
0 – 7.5	2 (insufficient)	0 – 10.0	2 (insufficient)
8.0 – 9.0	3 (sufficient)	10.5 – 12.0	3 (sufficient)
9.5 – 10.5	3.5 (sufficient +)	12.5 – 14.0	3.5 (sufficient +)

	<table><tr><td>11.0 – 12.0</td><td>4.0 (good)</td><td>14.5 – 16.0</td><td>4.0 (good)</td></tr><tr><td>12.5 – 13.5</td><td>4.5 (good +)</td><td>16.5 – 18.0</td><td>4.5 (good +)</td></tr><tr><td>14.0 – 15.0</td><td>5.0 Very good)</td><td>18.5 – 20.0</td><td>5.0 Very good)</td></tr></table> Failed test can be repeated once. 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 i.e. individual records of student results, presence lists, database written questions.
Elements impelling final grade:	Final grade is equal with the grade of the final test.
Teaching base:	Lecture facilities of the Institute of Veterinary Medicine
Mandatory and supportive materials : 1. Small Animal Toxicology, 3rd Edition , ed. Patricia A. Talcott & Michael E. Peterson, Elsevier, 2012 2. Blackwell's Five-Minute Veterinary Consult Clinical Companion: Small Animal Toxicology, ed. Hovda, Brutlag, Poppenga, Peterson, Wiley Blackwall, 3. Veterinary Toxicology, ed. RC Gupta, Elsevier, 2018 4. Clinical Veterinary Toxicology, ed. KH Plumlee, Mosby, 2004 5. Blackwell's Five–Minute Veterinary Consult Clinical Companion: Small Animal Emergency and Critical Care, ed. Elisa Mazzaferro, Wiley Blackwell, 2017 6. Small Animal Toxicology Essentials, ed. Robert H. Poppenga, Sharon M. Gwaltney-Brant, Wiley, 2011 7. Carpenter's Exotic Animal Formulary 6th Edition , ed. James W. Carpenter, Craig Harms, Saunders, 2022 8. Common Toxicologic Issues in Small Animals: An Update, An Issue of Veterinary Clinics of North America: Small Animal Practice, ed. Stephen B. Hooser & Safdar A. Khan, Elsevier, 2018 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:	**30 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 course of each outcomes
Knowledge -	knows the most common poisonings reported in dogs and cats, including their causes and manifestations,	A.W.21, A.U.17 B.W.1, B.W.2, B.W.3	3 1
Knowledge -	knows and understands the diagnostics rules and non-specific and specific therapy protocols used in acute and chronic poisonings,	A.W.21 A.W.16, B.W.4	3 2
Knowledge -	knows the consequences of incorrect dosing of mineral and phytogenic feed additives in companion animals,	A.W.16	2
Skills -	is able to collect toxicological data, including data specific for individual animal species,	A.U.12, A.U.13 B.U.2	1 2
Skills -	is able to select samples and diagnostic tests to confirm a poisoning,	B.U.6, B.U.23	2
Skills -	can chose the most suitable therapy protocol in acute and chronic poisonings	B.U.13	2
Skills -	is able to perform differential diagnostic process in case of poisoning suspicion	B.U.6	1
Competences -	is prepared to make its mind in a situation of chemical hazard (decide about therapy protocols for affected animals and personal protective equipment for individuals involved)	K.S.1, K.S.5, K.S.10	2
Competences -	is prepared to advise animal owner in regards to safe use of mineral and phytogenic feed additives	K.S.9	1
Competences -	is ready to critically interpret the results of laboratory tests in case toxicological analysis	K.S.7	1