



Veterinary pharmacology I

ECTS: 5.00

SUBJECT MATTER CONTENT

LECTURE

Principles of general pharmacology (definitions, nomenclature, mechanism of drug action, disposition and fate of drugs in the body etc.). Drug acting on the autonomic (sympathomimetic and sympatholytic agents; parasympathomimetic and parasympatholytic agents) and somatic (agents acting on neuromuscular junction) nervous systems. Local anesthetics. Drugs acting on the central nervous system: inhalation anesthetics, injectable anesthetics, opioid agonists and antagonists, neuroleptics, α 2-adrenergic agonists, anxiolytic drugs, hypnotic drugs, skeletal muscle relaxant, anticonvulsant drugs, antidepressant agents, analeptic agents and euthanizing agents.

CLASSES

Drug regulation and registration processes. Pharmacokinetic workshops: evaluation of basic pharmacokinetic parameters using software Biokinetica. Pharmacology of drugs affecting autonomic nervous system - repetitive course. Diuretics. Cardiovascular pharmacology: drugs used in heart failure and pharmacotherapy of heart failure, antiarrhythmic drugs, antihypertensive drugs and pharmacotherapy of hypertension and drugs used in treatment of ischaemic heart disease - practical classes with the use so-called "puzzles". Pharmacology of the central nervous system - selected issues (e.g. drugs affecting animal behavior, drug dependence and abuse). Effect of caffeine and theine on visual-motor coordination with using the Piorkowski and cross apparatuses - practical classes. Seminar talk - selected topics in pharmacology.

TEACHING OBJECTIVE

The aim of this course is to develop knowledge and skills of veterinary pharmacology and pharmacotherapy, which students need to be appropriately prepared to perform the profession of veterinary doctor.

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:

Symbols for outcomes related to the discipline:

R/WA_P7S+++

Symbols for outcomes related to the field of study:

A.W17. +, A.W19. +, K.1.+ , B.W3. +, K.4.+ , A.W12. +, A.W16. +, B.U9. +, B.U11. +, B.U13. +, B.U10. +, K.8.+

LEARNING OUTCOMES:

Knowledge:

Legal acts specifying learning outcomes:
682/2020
Disciplines: Veterinary science
Status of the course: Obligatoryjny
Group of courses: A - przedmioty podstawowe
Code: ISCED 0841
Field of study: Veterinary Medicine
Scope of education:
Profile of education: General academic
Form of studies: full-time
Level of studies: uniform master's studies
Year/semester: 3/5

Types of classes: Lecture, Classes
Number of hours in semester: Lecture: 30.00, Classes: 30.00
Language of instruction: Polish
Introductory subject: Chemistry, biochemistry, physiology, histology and microbiology.
Prerequisites: Appropriate level of knowledge in the above mentioned subjects.

Name of the organisational unit conducting the course: Katedra Farmakologii i Toksykologii
Person responsible for the realization of the course: prof. dr hab. wet. Jerzy Jaroszewski
e-mail: jerzyj@uwm.edu.pl

Additional remarks:

W1 – Student: a) achieves the knowledge of the general pharmacology on veterinary doctor level, with particular reference to the understanding of the importance (in both negative and positive aspects) of pharmacokinetic and pharmacodynamic drug interactions; (b) achieves the knowledge of groups of drugs discussed during course with respect to pharmacological effects, pharmacokinetic properties, interactions, side effects and contraindications of these drugs; b) knows current guidelines for the treatment of cardiovascular and central nervous system diseases.

Skills:

U1 – Student: a) interprets and applies pharmacological terminology appropriately; is able to find reliable and objective sources of knowledge on the drugs used for prophylaxis and treatment of diseases in animals, as well as to find current guidelines for the treatment of these diseases; c) is able to select the drugs to perform sedation, general and regional anesthesia; (d) is able to select appropriate drugs - on the basis of the relevant guidelines – for the treatment of most important cardiovascular diseases (among others: systolic and diastolic heart failure and hypertension) and central nervous system disorders (among others: epilepsy, anxiety disorders and obsessive-compulsive disorder).

Social competence:

K1 – Student: a) shows initiative and updates the knowledge in the pharmacology field; b) is aware of the benefits and risks associated with drugs use; c) is aware of personal limitations.

TEACHING FORMS AND METHODS:

Lecture(W1;U1;):Informative lectures with multimedia presentations

Classes(W1;U1;K1;):Taking tests; informative classes with multimedia presentations; interactive classes with the using so-called "puzzles" with respect to pharmacological properties of particular groups of drugs; pharmacokinetic workshops: evaluation of basic pharmacokinetic parameters with software Biokinetica; teamwork; discussion; evaluation of the effect of caffeine and theine on visual-motor coordination with using the Piorkowski and cross apparatuses - practical classes.

FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:

Lecture (Colloquium test) - Three written colloquiums will take place during the semester as described below. -

Classes (Colloquium test) - Three written colloquiums will take place during the semester. The grade of the colloquium will be determined by averaging the grades obtained on particular questions. Rules for rounding grades: the average $\geq 4,76$: excellent (5,0); the average 4,26 – 4,75: very good (4,5); the average: 3,76 – 4,25: good (4,0); the average 3,26 – 3,75: satisfactory (3,5); the average $\leq 3,25$: sufficient (3,0). Student who fails colloquium may retake it only twice. In order to pass the subject it is required to have passed all colloquiums. Final grade for the subject is determined by averaging the grades (including failing grades) obtained on all colloquiums. Rules for rounding of final grade are the same as described above. Failure of any colloquiums constitutes failure of Veterinary Pharmacology I course. Only three absences (justified) in a semester are allowed. In the semester in which Veterinary Pharmacology I course is taught, the verification of the achievement of learning outcomes with respect to the lecture topics is an integral part of the colloquiums taking place during classes. Therefore, the requirements to be met in order to obtain a credit for the lectures are the same as those described for classes. Additionally, achievement of learning outcomes with respect to the lecture topics will be verified by the final exam, which is conducted after course completion; it is described in syllabus concerning Veterinary Pharmacology II course. -

BASIC LITERATURE:

1. Riviere J.E. Papich M.G., *Veterinary Pharmacology and Therapeutics*, Wyd. Wiley-Blackwell, R. 2018
2. Maddison J.E., Page S.W., Church D.B., *Small Animal Clinical Pharmacology*, Wyd. Elsevier Saunders, R. 2008

SUPPLEMENTARY LITERATURE:

1. Kostowski W. Hermann A.S., *Farmakologia, Podstawy farmakoterapii*, Wyd. Wydawnictwo Lekarskie PZWL, R. 2017
2. Papich M.G., *Leki w weterynarii. Małe i duże zwierzęta*, Wyd. Elsevier Urban Partner, R. 2013
3. Katzung B.G. Masters S.B., *Basic and clinical pharmacology*, Wyd. McGraw-Hill, R. 2009

