Code of subject	M_WE_SEM8 PW 1F/2F ANTYB
Field of study	Veterinary medicine
Name of the training module including the Polish name	Practical aspects of rational antimicrobial therapy in animals Praktyczne aspekty racjonalnej antybiotykoterapii u zwierząt
Language of instruction	English
Type of the training module	elective
Level of the training module	Master level
Form of studies	Stationary
Location in the programme (year)	IV
Location in the programme (semester)	VIII
Number of ECTS credits with a division into contact/noncontact	1 (0,73/0,27)
Name and surname of the person in charge	Aneta Nowakiewicz dr hab.
Unit offering the subject	Sub-Department of Veterinary Microbiology
Aim of the module	The aim of the module is to familiarize the student with the principles of rational antibiotic therapy used in various species of animals and the practical aspects of the methodology of determining and interpreting the drug susceptibility of microorganisms. The module also aims to familiarize the student with the principles of selecting antibacterial drugs when constructing antibiograms depending on the species / group of animals, availability, route of administration and side effects of the administered substances, as well as conditions related to the specificity of the species of the microorganism. The most common types of drug resistance and multi-drug resistance in terms of threats to animal and human health will also be presented.
Learning outcomes	Konowledge:
	K1. knows the principles of selection, advantages and disadvantages of the methods of drug susceptibility testing and the criteria for the interpretation of the obtained results
	K2. Knows the principles of proper antibiotic therapy in various animal species and the consequences of improper use of antibacterial drugs and their impact on public health
	Skills:
	S1. Is able to select and apply appropriate methods of drug susceptibility assessment, to perform procedures, properly and safely handle biological material as well as to analyze and interpret test results depending on the species of microorganism, species and clinical status of the host
	S2 Is able to design his own profile of drug susceptibility assessment tests in accordance with the diagnostic needs, the progress of knowledge as well as legal and economic conditions
	U3. Can rationally apply the obtained results in the antimicrobial therapy of infectious animal diseases.
	Social competences: student is ready to:

	S1. work and collaborate in a group, has a sense of responsibility for other team members		
	S2. demonstrate social and professional responsibility for the tasks performed in the aspect of animal health and public health protection.		
	S3. self-criticism and evaluation of own limitations, in the era of rapidly emerging new diagnostic techniques and therapeutic methods, understands the need for ongoing training and deepening knowledge of the issues of the module		
Preliminary and additional requirements	-		
Contents of the training module – a compact description	Content of lab classes: Main definitions and standards for the determination of antimicrobial resistance: available guides that define drug susceptibility criteria Methods of phenotypic determination of drug susceptibility: test principles, factors influencing the formation of false-positive or false-negative results. Importance and validity of molecular tests in routine diagnostics. Why should we follow the standards? The most common mistakes when assessing drug susceptibility and creating an antibiogram. Interpretation of results: drug susceptibility criteria for particular groups of microorganisms; the most common types of natural resistance among bacteria isolated from animals - importance in diagnosis and therapy Principles of rational antibiotic therapy in dogs and cats Principles of rational antibiotic therapy in horses Principles of rational antibiotic therapy in production animals Principles of rational antibiotic therapy in rabbits and rodents Resistance and multi-drug resistance versus therapeutic possibilities in human and veterinary medicine. "True pathogens" and indicator bacteria: why monitor? Drug resistance as a result of improper therapeutic treatment: today and future threats		
Recommended and obligatory reading list	Antimicrobial therapy in veterinary medicine, Eds. Giguere S., Precsott JF, Dowling P. Willey Blackwell		
The intended forms/activities/ teaching methods	discussion, independent project of the diagnostic procedure		
Methods of verification and documentation forms of the achieved learning outcomes	K –pass the module is based on a positive result obtained in the thematic test: answer to 4 open-ended questions at a minimum level of 61% - oral response during each exercise S - assessment of self-conducted laboratory procedures and experiments by the teacher, S - participation in the discussion, answer to the questions at the beginning of each laboratory class, written tests. The grading scale is in line with FBQC		
Balance of ECTS credits	CONTACT		
		Hours	*ECTS*

	Lab classes	*15*	*0,6*
	consultations	*1*	*0,03*
	grade	*3*	*0,1*
	Total	***18***	***0,73***
	NON CONTACT		
	Preparation for lab classes	*3*	*0,1*
	Preparation for passing	*5*	*0,17*
	Total	***8***	***0,27***
Number of contact hours	Lab classes	*15*	*0,6*
	consultations	*1*	*0,03*
	Grade	*3*	*0,1*
	Total	***18***	***0,73***
Relationship between subject learning outcomes and veterinary studies learning outcomes	K1-A.W13+, A.W15+, A.W17++ K2- A.W13+, A.W15+, A.W17++, A.W18+++ S1-A.U10++, A.U11+++ S2- A.U16++, A.U19+++ S3- B.U9++, B.U10+, B.U13++ C1-WE_K11++ C2-K1++ C3-K1++, K10+		
Impact of selected compounds to final grade	The number of absences cannot exceed 2 hours. Final grade: 80% final pass grade, 20% grade for active participation in classes. The grade may be increased by half a grade if the student prepares an additional thematic speach and presents it during class.		