Module title:	Herd health management	**ECTS**	**2**
Polish translation:	Zarządzanie zdrowiem stada		
Course:	**Veterinary Medicine**		

Module language: English				Stage: JM	
Form of studies: ■ intramural ☐ extramural	Type of module: ☐ basic ■ directional ☐ accessory ☐ rotation ☐ summer practice	■ mandatory ☐ elective	Semester: 11 Year 6	■ winter semester ☐ summer semester	
Academic year:			**2019/2020**	Catalogue number:	FVM-V-JMSS-11W-D30_19

Module coordinator:	Prof. Zdzisław Gajewski Dr Sc.		
Teachers responsible for the module:	Academic teachers of Center for Translational Medicine (CMT WULS), PhD students, visiting professors and other specialists in the field of study		
Unit responsible for the module:	Center for Translational Medicine (CMT)		
Faculty in charge:	Faculty of Veterinary Medicine		
Objectives of the module:	The herd health management covers all activities and decisions aimed at maintaining good health and well-being among high-production animals. For this purpose, it is necessary to know the methods of obtaining and analysing the health and the data of livestock production, the methods of feeding control, the metabolic and reproduction disorders in different phases of the production cycle. Herd health management is an interdisciplinary approach that combines knowledge from a wide range of veterinary and zootechnical and economic sciences.		
Teaching forms, number of hours:	a) Lectures: 30 h b) Practicals: 33 h c) Field practice: 12 h		
Teaching methods:	Monographic lectures with visualization in Power Point; Laboratory exercises with programs for feeding and rearing herds; Field exercises "case study" knowledge and evaluation of the management system in the farm and herd; Project exercises - preparing calendars of critical points of the farms.		
Formal prerequisites and initial requirements:	Animal anatomy modules 1-2, Animal physiology modules 1-2, Biochemistry modules 1-2, Animal pathophysiology, Animal husbandry and breeding, Farm animal diseases, Feed hygiene, Clinical and laboratory diagnostics modules 1-2, Veterinary pharmacology modules 1-2, Veterinary microbiology modules 1-2, Veterinary epidemiology Student possesses knowledge and abilities obtained already during the study course		
Learning outcomes:	Knowledge: 01-Identifies and describes biology of contagious factors causing diseases transferred between animals and antropozoonozes, including mechanisms of their transfer and animal's defence mechanisms. 02-Describes and interprets causes and symptoms of diseases, describes and interprets diseases' pathomorphology manifestations and implements principles of prevention in particular diseases 03-Examines clinically the patients and monitors health in production herds	Skills: 06-Effectively communicates with clients, other veterinarians and officers of control units, state and self-government administration 07-Performs entire case study procedure to obtain precise information on single animals or groups of animals and living environment	Competences: …….. ……..

	04-Collects, evaluates and properly interprets clinical data and laboratory analysis and other data 05-Describes and evaluates conditions providing animal welfare		
Assessment methods:	Effects 01-05- written work in the form of short open questions in the exercise classes and/or student activity during the classes, effects 06-07 - evaluation of the performance of the project task; effects 01- 07 - written exam. At the selected classes, written tests of the Student's level of theoretical preparation may be performed (the so-called entrance test). The entrance test consists of 3-7 questions (open and/or fill-in and/or single/multiple choice questions). Unexcused absence from the exercises results in 0 points from the entrance test. In order to pass the exercises and to take the exam, a minimum of 51% of the points from all the entrance exams and a positive grade from the project assignment are required. If a student does not obtain the required number of points from the entrance examinations, he/she must take the so-called exit exam, covering the entire scope of the exercise material. The exit exam consists of 6-14 questions, and the minimum passing threshold is 51%. Unexcused absence from the exit exam results in 0 points. A student who has not obtained the specified minimum number of points from the exit exam is not allowed to take the exam and does not receive credit for the course. During practical classes, the Student's activity is evaluated. On the basis of observations and data obtained during clinical and field classes, as well as available literature, the Student develops a project task. It is evaluated on the basis of compliance of the content with the assigned topic, correct inference, formulation of rational solutions, discussion and answering questions. The written exam in the form of a mixed test (open and/or fill-in and/or single/multiple choice questions) covers all the educational content of the course. The minimum passing threshold is 51%. Term I and II of the exam are held in the same form. In the case of top-down suspension of the implementation of classes at the University and the need for remote/hybrid teaching, other methods of verification of the realized learning outcomes are allowed in a manner appropriate to the situation.		
Formal documentation of learning outcomes:	Entry in the eHMS system and documentation contained in the "Course file" (student evaluation sheets, attendance lists, students' written work, etc.).		
Elements impelling final grade:	A student who has not submitted a project assignment and/or has not obtained a predefined minimum acceptable number of points from the "entrance exams" is not allowed to take the exam and does not receive credit for the course. The final grade for the course is affected by the following: - evaluation of short written papers and/or activity during practical classes, - evaluation of the execution of the project task, - grade from the exam.		
Teaching base:	Classrooms, lecture halls, laboratories of CMT and FVM, outside farms.		

Mandatory and supportive materials :

1. Carleton. Blackwell's Five-Minute Veterinary Consult Clinical Companion: Equine Theriogenology. 2011. Wiley-Blackwell.
2. Cockcroft P. Bovine Medicine. 2015. John Wiley and Sons
3. de Kruif A., Mansfeld, Hoedemaker M. Tieraerztliche Bestandsbetreung beim Milchrind. 2007. Enke.
4. Green M. Dairy Herd Health. 2012. CABI Publishing.
5. Horsfall T. Flint Ch.L. Milch Cows and Dairy Farming: comprising the breeds, breeding, and management in health and disease, of dairy. 2017. Hansebooks
6. Hulsen J.H.J.L., Lam T., Felius M. Stewart S. Udder Health: a practical guide to first-rate udder health. 2008. Roodbont Publishers B.V.
7. Noordhuizen J. Dairy Herd Health and Management: A Guide For Veterinarians And Dairy Professionals. 2012. Context Publications
8. Peek S.F., Divers T.J. Diseases of dairy cattle. 2016. Elsevier.
9. Pugh D.G, Baird N., Edmonson M., Pasller T. Sheep, Goat, and Cervid Medicine. 2020 Elsevier.
10. Thomas. H. S. The Cattle Health Handbook. 2009. Storey Publishing, LLC.
11. Scientific publications pointed out by the lecturer in the field of the educational content discussed and scientific research conducted in the facility.

ANNOTATIONS:

Protective uniform and individual protective equipment in accordance with accepted bio-assurance principles are mandatory during the exercise classes.

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:	**75 h**
Total ECTS points, accumulated by students during contact learning:	**2 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 outcomes*)
Knowledge -	01-Identifies and describes biology of contagious factors causing diseases transferred between animals and antropozoonozes, including mechanisms of their transfer and animal's defence mechanisms	WW_NP8	3
Knowledge -	02-Describes and interprets causes and symptoms of diseases, describes and interprets diseases' pathomorphology manifestations and implements principles of prevention in particular diseases	W_NK3	3
Knowledge	03-Examines clinically the patients and monitors health in production herds	W_NK5	3
Knowledge	04-Collects, evaluates and properly interprets clinical data and laboratory analysis and other data	W_NK7	3
Knowledge	05-Describes and evaluates conditions providing animal welfare	W_PZ4	3
Skills	06-Effectively communicates with clients, other veterinarians and officers of control units, state and self-government administration	U_OUZ2	3
Skills	07-Performs entire case study procedure to obtain precise information on single animals or groups of animals and living environment	U_PUZ1	3

*)

3 – Significant and detailed,

2 – Partial,

1 – Basic,

WNZ-ZT-1Z-08Z-03_19

Kod Wydziału-Kod kierunku-Kod poziomu i formy-numer semestru Z zimowy L letni-numer przedmiotu w planie semestru_rok akademicki, od którego obowiązuje opis / 2019-2020 →19/

WNZ – Wydział nauk o zwierzętach (kod HMS)

ROL	Rolnictwa i Biologii
WET	Medycyny Weterynaryjnej
LES	Leśny
OGR	Ogrodnictwa, Biotechnologii i Architektury Krajobrazu
BIS	Budownictwa i Inżynierii Środowiska
TDR	Technologii Drewna
WNZ	Nauk o Zwierzętach
EKR	Nauk Ekonomicznych
NoZ	Nauk o Żywności
ZCZ	Nauk o Żywieniu Człowieka i Konsumpcji
WIP	Inżynierii Produkcji
ZIM	Zastosowań Informatyki i Matematyki
WNH	Nauk Społecznych

ZT – zootechnika

A	architektura krajobrazu
B	biologia
BD	budownictwo
BT	biotechnologia
BW	bioinżynieria zwierząt
BZ	bezpieczeństwo żywnosci
D	dietetyka
E	ekonomia
ER	ekologiczne rolnictwo i produkcja żywności
F	finanse i rachunkowość
	weterynaria
GH	gastronomia i hotelarstwo
GP	gospodarka przestrzenna
H	hodowla i ochrona zwierząt towarzyszących i dzikich
IB	inżynieria systemów biotecchnicznych
IE	informatyka i ekonometria
IG	inżynieria i gospodarka wodna
IK	inżynieria ekologiczna
IN	informatyka
IS	inżynieria środowiska
L	logistyka
LS	leśnictwo
M	meblarstwo
O	ogrodnictwo
OR	ochrona zdrowia roślin
OS	ochrona środowiska
P	pedagogika
R	rolnictwo
S	socjologia
TD	technologia drewna
TE	technologie energii odnawialnej
TU	turystyka i rekreacja
TB	towaroznawstwo w biogospodarce
TZ	technologia zywnosci i zywienie człowieka
W	weterynaria
W-N	weterynaria
	weterynaria
Z	zarządzanie
ZC	żywienie człowieka i ocena żywnosci
ZP	zarządzanie i inżynieria produkcji
ZT	zootechnika

1Z – studia I stopnia niestacjonarne

1S – I st., stacjonarne;

2S – II st., stacjonarne;

2Z – II st., niestacjonarne