Module of classes:

MOLECULAR DIAGNOSTICS IN VETERINARY

ECTS	**2**
Status	**complementary**
Form of final credit	**graded credit**
Prerequisites	**Genetics, food hygiene**

Field of study:

VETERINARY SCIENCE

Profile of study	**General-academic**
The code of the form of study and the level of study	**Master**
Semester of study	**winter/summer**
Language of study	**English**

The leading faculty, department and the lecturer of the module:

Name of the competent unit for the coordinator	**Faculty of Animal Sciences, Department of Genetics, Animal Breeding and Ethology**
Courese coordinator	**dr inż. Łukasz Migdał, prof. URK**

Learning outcomes of the module/subject

The code of the description component (symbol of the effect)	Description	Relation to (code)	
		field effect	discipline#
	KNOWLEDGE – the student knows and/or understands:		
MD_W1	the basics of livestock production	O.W8, O.W13, B.W1, B.W2, B.W3, B.W6	RW
MD_W2	different breeds, how animals are selected for reproduction and know how genetics disease can be spread in population	B.W11, B.W12	RW
MD_W3	structure and function of nucleic acids, aminoacids sequence and flow of genetic information (central dogma of molecular biology)	A.W14	RW
MD_W4	development of organisms, how diferent systems are build and processes occuring within systems and between systems	A.W1, A.W2, A.W4, A.W8,	RW
MD_W5	use English in the fields of science and disciplines relevant to the field of study being studied, in accordance with requirements specified for B2 + level of the European Description System Language Education	C.W1	
	SKILLS – the student can:		

MD_U1	plan diagnostic procedures based on collected data and information	O.U3, O.U2, B.U2, B.U6	RW
MD_U2	explain breeders/owners influence of changes in DNA on protein level and therefore how it can change function of organisms. Can explain how dangerous is keep of breeding carriers	A.U13, A.U14	RW
MD_U3	Search database for information about molecular background of diseases and about possible diagnostic tools	C.U3	RW
	SOCIAL COMPETENCE- the student is ready to:		
MD_K1	understands the need for systematic work on finding and understanding new informations about molecular methods/molecular basis of traits	O.K5, O.K8, O.K9	RW

Teaching content:

Lectures			**0**	**hours**
Subjects of lectures				
Realized learning outcomes				
Verification methods and criteria of effects				
Classes - laboratories and auditorium exercises			**30**	**hours**
Subjects of the classes	1. Molecular tools used in veterinary and husbandry - selection using molecular methods and genetic diseases (3h) 2. Genetic diseases of ruminants (3h) 3. Genetic diseases of pigs (3h) 4. Genetic diseases of horses (3h) 5. Genetic diseases of companion animals (dogs, cats etc.) (6h) 6. Identification of changes in kariotypes of livestock and companion animals (6h) 7. Molecular tools used in animal products processing (frauds and identification of species origin) (3h) 8. DNA tests for animals - parentage testing (3h)			
Realized learnin	*MD_W1, MD_W2, MD_W3, MD_W4, MD_W5, MD_U1, MD_U2, MD_U3, MD_K1,*			
Verification methods and criteria of effects	*Short question, multiple choice questions (100-95% - 5.0; 94-86% - 4.5; 85-76% - 4.0; 75-66% - 3.5; 65-60%-3.0)*			
Seminars			**...**	**hours**

Subjects of the seminars	
Realized learnin	
Verification methods and criteria of	

Literature:

Basic	*Genomes 4. T.A. Brown, Garland Science, 4rd edition, 2017.*
Supplementary	*online databases and programmee instructions*

Structure of learning outcomes:

Dyscipline – veterinary (RW)				*2*	ECTS*
Dyscipline –…				…	ECTS*

Structure of student's activities:

classes carried out with direct		33	hours	1,3	ECTS*
including:	lectures	0	hours		
	classes and seminars	30	hours		
	consultations	2	hours		
	participation in research	0	hours		
	mandatory practices and internships	0	hours		
	participation in the exam and credits	1	hours		
classes carried out with the use of e-learning		0	hours	0	ECTS*
student's own work		17	hours	0,7	ECTS*

Syllabus valid from the academic year 2019/2020

) * - Reported to the nearest to 0,1 ECTS, where 1 ECTS = 25-30 hours of classes

) # discipline code: RZ - zootechnics and fishery, PB - biological sciences