Module of classes:

BASICS OF ANIMAL NUTRITION

ECTS	**7**
Status	**complementary**
Form of final credit	**exam**
Prerequisites	**basic knowledge and skills in biology, animal physiology and biochemistry**

Field of study:

ZOOTECHNICS

Profile of study	**General-academic**
The code of the form of study and the level of study	**bachelor**
Semester of study	**winter or 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 Nutrition and Biotechnology of Animals, and Fisheries**
Course coordinator	**Prof. dr hab. Zygmunt M. Kowalski, dr hab. Paweł Górka, 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:			
BAN_W1	basic issues in the field of animal nutrition, especially regulation of feed intake, digestion and absorption of nutrients, as well as feeding of different groups of livestock	ZOO1_W09	RZ
BAN_W2	biological processes occurring during preservation of feeds	ZOO1_W09	RZ
BAN_W3	rules for assessing the nutritive value of feeds	ZOO1_W09	RZ
SKILLS – the student can:			
BAN_U1	take the representative sample of feed and analyze its chemical composition	ZOO1_U08	RZ
BAN_U2	plan the nutritional experiment, including the measurement of digestibility and N balance	ZOO1_U08	RZ
BAN_U3	assess the nutritive value of feeds	ZOO1_U08	RZ
BAN_U4	formulate the diet for dairy cow and horse	ZOO1_U08	RZ
SOCIAL COMPETENCE- the student is ready to:			
BAN_K1	present an active attitude in the area of dissemination and implementation of practical knowledge and professional skills	ZOO1_K01	RZ
BAN_K2	formulate, name, describe, and explain the principles of ethical responsibility for the production of high-quality food from farm animals	ZOO1_K06	RZ
BAN_K3	take care of own safety and the safety of persons participating in a given undertaking, as well as care for one's own health and physical fitness	ZOO1_K10	RZ

Teaching content:

Lectures		**30**	**hours**
Subjects of lectures	Role of nutrients (protein, energy, minerals and vitamins) Digestibility of nutrients and tissue metabolism Methods used in animal nutrition studies Assessment of nutritive value of feedstuffs Classification of feedstuffs Methods of feedstuffs conservation and processing Feeding of dairy cows and calves		

	Feeding of horses and sheep Feeding of swine and poultry Animal feeding and environmental protection
Realized learning outcomes	*BAN_W1-BAN_W3; BAN_K1-BAN_K3*
Verification methods and criteria of effects evaluation	*Test covering messages provided to students during lectures. Positive mark - getting at least 55% positive answers*

Classes (laboratories, field exercises, auditorium exercises etc. …)		**45**	**hours**
Subjects of the classes	Proximate analysis		
	Dry matter conversion		
	Digestibility measurement		
	Protein value of the feed		
	Energy value of the feed		
	Classifications of feeds		
	Quality of silages and hays		
	Diet formulation		
	Practical nutrition of dairy cattle (field trip)		
Realized learning outcomes	BAN_U1-U4		
Verification methods and criteria of effects evaluation	*Test covering messages given to students during classes. Positive mark - getting at least 55% positive answers*		

Seminars		**0**	**hours**
Subjects of the seminars			
Realized learning outcomes			
Verification methods and criteria of effects			

Literature:

Basic	*1. Jamroz D. i wsp., 2015. Żywienie zwierząt i paszoznawstwo. Tom 1,2, 3. Praca zbiorowa pod red. D. Jamroz. PWN 2015. 2. Van Soest P.J., 1994. Nutritional Ecology of the Ruminant. Cornell University Press. 3. Animal Nutrition 7th edition, McDonald et al. Ed Prentice Hall, Pearson, USA. 2010.*
Supplementary	NRC, 2001. 7th Revised Edition, Subcommittee on Dairy Cattle Nutrition, Committee on Animal Nutrition, Board on Agriculture and Natural Resources, National Research Council, National Academy Press, Washington, D.C.

Structure of learning outcomes:

Dyscipline – animal husbandry and fishery (RZ)			*7*	ECTS*
Dyscipline –…			*…*	ECTS*
Structure of student's activities:				
classes carried out with direct participation of the teacher	87	hours	3,5	ECTS*
including: lectures	30	hours		
classes and seminars	45	hours		
consultations	9	hours		
participation in research	0	hours		
mandatory practices and internships	0	hours		
participation in the exam and credits	3	hours		
classes carried out with the use of e-learning	0	hours	0	ECTS*
student's own work	88	hours	3,5	ECTS*