

Course name:**PHENOMENOM OF SEASONALITY IN SMALL RUMINANTS**

ECTS	2
Course status	complementary
Course final assesement/evaluation of outcomes	exam
Prerequisites	passing the subject animal physiology

Main field of study:**ANIMAL SCIENCE**

Profile of study	General-academic
The code of studies (education level)	SM (master)
Semester of studies	summer
Language of instruction	English

Course offered by:

Name of faculty offering the course	Faculty of Animal Science
Name of department offering the course	Department of Nutrition, Animal Biotechnology and Fisheries
Course coordinator	prof. Dorota Zięba-Przbylska

Learning outcomes of the course:

Symbol of outcome	Description of learning outcome	Reference to	
		main field of study outcomes	discipline#

KNOWLEDGE – student knows and/or understands:

PSSR_W1	structure of cell and tissues related to the biological clock in mammals, mainly sheep. The characteristics of the biological rhythms, processes concern the seasonality of reproduction in sheep and goat.	ZOO2_W01	RZ
PSSR_W2	mechanisms of molecular processes related to the mechanism of the biological clock in all living organisms. Knows the basics of molecular genetics.	ZOO2_W05	RZ
PSSR_W3	advanced theoretical aspects of animal husbandry and breeding methods; the suitability of different animal species as models in biological and medical research.	ZOO2_W11	RZ

SKILLS – student is able to:

PPP_U1	_U..	

SOCIAL COMPETENCE- student is ready to:

--	--	--	--

PSSR_K1	undertake actions leading to reduction of risk and predicting the effects of human activities in the area of zootechnics and animal living environment.	ZOO2_K04	RZ
PSSR_K2	solving complex decision problems related to the use of animals.	ZOO2_K05	RZ
PSSR_K3	care for animal welfare and the shaping and condition of the natural environment.	ZOO2_K06	RZ

Teaching contents:

Lectures **15** **hours**

Topics of the lectures	<p>Biological rhythms - features and characteristics.</p> <p>The role of melatonin in the functioning of the biological clock of animals.</p> <p>Neurohormonal mechanism of the biological clock.</p> <p>Molecular aspects of the functioning of the biological clock in animals.</p> <p>Molecular aspects of modulation of leptin sensitivity on the level of hypothalamus - leptin resistance and photoperiod.</p> <p>The effect of day length on the course of sexual activity in sheep: regulation of gonadotropic hormone secretion and melatonin as a modulator of reproductive processes.</p> <p>The latest achievements in the world literature regarding the participation of photoperiod in the regulation of reproductive processes in ruminants.</p>
------------------------	--

Accomplished learning outcomes *PSSR_W1- W3; PSSR4_K1-K3*

Verification methods, rules and criteria of outcome assessment *together with participation in the final assessment (in 60%)*

Classes **...** **hours**

Topics of the classes	
-----------------------	--

Accomplished learning outcomes *symbol of learning outcomes for the classes*

Verification methods, rules and criteria of outcome assessment *together with participation in the final assessment (in %)*

Seminars **...** **hours**

Topics of the seminars	
------------------------	--

Accomplished learning outcomes *symbol of learning outcomes of the seminars*

Verification methods, rules and criteria of outcome assessment	together with participation in the final assesement (in %)
--	--

References:

Basic	1. Reproduction in sheep and goats. Ian Gordon. CAB International 1997. 2. Neural control of reproduction. Ophysiology and Behavior. Japan Scientofic Societies press Karger 1998.
Supplementary	1. D.A. Zieba, B. Klocek, G.L. Williams, K. Romanowicz, L. Boliglowa, M. Wozniak. In vitro evidence that leptin suppresses melatonin secretion during long days and stimulates its secretion during short days in seasonal breeding ewes. <i>Domest. Anim. Endocrinol.</i> 2007; 33(3): 358-365. 2. D.A. Zieba, M. Szczesna, B. Klocek-Gorka, E. Molik, T. Misztal, G.L. Williams, K. Romanowicz, E. Stepien, D.H. Keisler, M. Murawski. Seasonal effects of central leptin infusion on melatonin and prolactin secretion and on SOCS-3 gene expression in ewes. <i>J. Endocrinol.</i> 2008; 198: 147-155.

Structure of learning outcomes:

Discipline: # RZ	2	ECTS**
Discipline: # (provide appropriate symbol - if the course relates to more than one academic discipline)	...	ECTS**

Structure of student activities:

Contact hours	25	hours	1	ECTS**
including:				
lectures	15	hours		
classes and seminars	...*	hours		
consultations	8	hours		
participation in research	...	hours		
mandatory trainershps	...	hours		
participation in examinations	2	hours		
e-learning	...	hours	...	ECTS**
student own work	25	hours	1	ECTS**

Syllabus valid from the academic year 2021/2022

* where 10 hours of classes = 1 ECTC (in case of 15 h → 2 ECTS)

** stated with an accuracy to 0.1 ECTS, where 1 ECTS = 25 - 30 hours of classes

academic discipline code: RZ - animal science and fishery, PB - biological sciences, etc.