

SYLLABUS (OF A COURSE/MODULE)

Course/module (as specified in the approved curriculum for the field of study) Ecology in animal husbandry (module 6)		ECTS 7	Catalogue number
Name in Polish Ekologia w hodowli zwierząt (moduł 6)			
Unit(-s) providing the course/module (Institute/Department) Department of Animal Breeding and Product Quality Assessment + Department of Animal Genetics and Breeding + Institute of Zoology/ Faculty of Veterinary Medicine and Animal Sciences			
Head of course/module Ryszard Skrzypek, prof. dr habil.			
Field of study Animal husbandry	Level 2nd level studies	Profile General academic	Semester 2nd
Specialisation Animal production management (Foreign students)	MSc Specialisation Animal production management (Foreign students)		
TYPE OF CLASSES/LECTURES AND THE NUMBER OF HOURS (organised classes/lectures and self-study)			
Type of studies: full-time		Type of studies: extramural	
- lectures	30	- lectures	
- classes	50	- classes	
- other tutored	25	-	
-		-	
-		-	
- Self-study	70	- Self-study	
Total number of hours:		175	Total number of hours:
OBJECTIVE OF COURSE/MODULE			
<p>The student will have a comprehensive theoretical and practical knowledge regarding certified ecological husbandry of most important farm animals, with particular reference to the interactions among husbandry, welfare and behavior, landscaping and preservation of the natural environment as well as product quality. The student will also have knowledge, skills and social competences in terms of active participation in creation of the development of rural areas and improvement of human life quality on the background of ecological trends in agriculture, with particular reference to certified ecological farming.</p>			
TEACHING METHODS			
<p>The courses will be performed within five subjects (in brackets are the numbers of lectures/classes): Conservation of animal genetic resources (11/9) – subject 1, Genetic management of small populations (0/10) – subject 2, Welfare of farmed animals (0/13) – subject 3, Behavior of domestic animals (4/6) – subject 4, Ecological animal farming (15/12) – subject 5. They will have the following forms: (1) lectures with multimedia presentations, (2) interactive classes with multimedia presentation, (3) a field study on a farm (farms) managing native livestock breeds, (4) preparing and presentation a project.</p>			
LEARNING OUTCOMES		Reference to field outcomes	Reference to area outcomes
Knowledge	E1 – has in-depth knowledge on planning and organization of breeding programs for conservation of animal genetic resources	Z2A_W02	R2A_W01
	E2 – has advanced knowledge of EU legal regulations on ecological farming, allowing self-dependent management of a certified ecological farm or any other ecological agricultural undertaking	Z2A_W05 Z2A_W07 Z2A_W09 Z2A_W10 Z2A_W11	R2A_W02 R2A_W03 R2A_W04 R2A_W05 R2A_W06
	E3 – has knowledge on animal behaviour and welfare	InzA_W01	
	E4 – has in-depth knowledge on animal-environment interaction and its implications on the ecosystems, biodiversity and environment pollution	InzA_W02	
	E5 – knows the influence of nutrition on animal welfare and the environment	InzA_W05	

Skills	<p>E6 – is able to critically analyse and creatively process information on ecology and ecological animal husbandry and to use it for research and practical tasks aimed at combining excellent animal welfare, high product quality and high standards of the environment</p> <p>E7 – is able to present self-prepared materials, its position and views through modern methods of communication</p> <p>A8 – is able to develop the breeding program for a specific circumstances typical for ecological farming</p> <p>E9 – independence in planning, implementation and economic evaluation of correctness of the performed eco-certified animal husbandry task or any other ecological undertaking associated with practical ecological farming</p> <p>E10 – is able to write basic forms of scientific texts and to present orally the results of their research</p> <p>E11 – has English language skills at the B2+ level to use all basic forms of written and oral communications in the field of ecological farming</p>	<p>Z2A_U01 Z2A_U02 Z2A_U04 Z2A_U07 Z2A_U08 Z2A_U10 Z2A_U11 Z2A_U12 Z2A_U14 InzA_U01 InzA_U02 InzA_U03 InzA_U06 InzA_U07 InzA_U08</p>	<p>R2A_U01 R2A_U02 R2A_U04 R2A_U05 R2A_U06 R2A_U07 R2A_U08 R2A_U09 R2A_U10</p>
Social competences	<p>E12 – is aware of extreme complexity of ecological issues in agriculture and the need of permanent learning in this field, can inspire such attitude</p> <p>E13 – is aware of key dilemmas of organic farming and can manage them</p> <p>E14 – has a full awareness of the role, which play animals in the human's life and presents an ecological attitude in animal breeding activities</p> <p>E15 – is aware of the importance of social, professional and ethical aspects of ecological farming methods, with particular reference to domestic animals</p>	<p>Z2A_K01 Z2A_K04 Z2A_K05 Z2A_K06 Z2A_K07 Z2A_K08 InzA_K01</p>	<p>R2A_K01 R2A_K02 R2A_K03 R2A_K04 R2A_K05 R2A_K06</p>
<p>Methods to verify learning outcomes</p> <p>Lectures – written test; classes – individual tasks, individual project preparation and presentation</p>		<p>Outcome Reference Numbers</p> <p>as above</p>	
<p>TEACHING CONTENT</p> <p>Lectures. Role and functions of certified ecological farming, with particular reference to farm animals. The issues of environment and nature preservation linked to certified ecological animal husbandry. Theoretical issues of animal welfare, behavior and conservative breeding. The impact of the type of agriculture on nutritive and health promotion values of food and the economics of production. Certified ecological farming and the development of rural areas and agro-tourism. Animals in the programs of rural development. The importance of local and endangered with extinction populations of animals in the certified ecological farming.</p> <p>Classes. Evaluation of animal welfare and behavior. Development of animal genetic resources preservation programs, including the management of small populations. UE regulations regarding to animal production management in certified ecological farms and their interpretation. Modern business models building and business plans development in a certified ecological farming.</p> <p>Project. Forming or modernization of a certified ecological farm or other ecological undertaking according to the rules of a business model. Development of a business plan.</p>			
<p>Forms and criteria for passing of course/module</p> <p>Lectures</p> <p>A written test (1) and an attendance at lectures (2) – required more than 50% of the points possible to attain jointly for:</p> <ol style="list-style-type: none"> 1. Written test – a method of single choice – 3 possible answers per item, including 1 correct answer. Jointly for all subjects, the number of items per subject depends on the number of hours. 2. Attendance. <p>Classes</p> <ol style="list-style-type: none"> 1. Attendance – according to PULS Studies Regulations and detailed module regulations. 2. Individual tasks assigned by the tutors – subjects 1-4 (see Teaching methods) separately. 3. Individual project and its presentation – subject 5 (see Teaching methods). 		<p>Percentage of final mark</p> <p style="text-align: center;">75%</p> <p style="text-align: center;">25%</p> <p style="text-align: center;">-----</p> <p style="text-align: center;">A weighted mean, accounting for the number of hours per subject (see Teaching methods)</p>	

LIST OF LITERATURE

Basic literature

- Bolhuis J.J., Giraldeau L.-A. (red.) (2005). The behavior of animals. Mechanisms, function, and evolution. Blackwell Publishing.
- Breed M.D., Moore J. (2011). Animal behavior. Academic Press.
- Commission Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91.
- Commission Regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control.
- European Commission (EC) (2007). Attitudes of EU citizens towards Animal Welfare.
www.ec.europa.eu/food/animal/welfare/survey/sp_barometer_aw_en.pdf.
- Manning A., Dawkins M.S. (2012) An introduction to animal behavior. Cambridge University Press.
- Słomski R. (2010). Restoration of endangered and extinct animals. Poznań University of Life Sciences, Poznań.

Complementary literature

- Antkowiak I., Pytlewski J., Purczyńska A., Skrzypek R. (2012). A preliminary study of the behaviour of water buffaloes (*Bubalus bubalis*) imported to Poland. Archiv für Tierzucht-Archives of Animal Breeding 55, 415-419.
- Bartošová J., Komárková M., Dubcová J., Bartoš L., Pluháček J. (2011). Current lactation and pregnancy: pregnant domestic mares do not increase mother-offspring conflict during intensive lactation. PLoS ONE 6, e22068.
- Bell A.W. (1995). Regulation of organic nutrient metabolism during transition from late pregnancy to early lactation. Journal of Animal Science 73, 2804-2819.
- Bennett R., Blaney R. (2002). Social consensus, moral intensity and willingness to pay to address a farm animal welfare issue. Journal of Economic Psychology 23, 501-520.
- Boogaard B.K., Oosting S.J., Bock B.B. (2006). Elements of societal perception of farm animal welfare: A quantitative study in The Netherlands. Livestock Science 104, 13-22.
- Bracke M.B.M., Greef K.H.D., Hopster H. (2005). Qualitative stakeholder analysis for the development of sustainable monitoring systems for farm animal welfare. Journal of Agricultural and Environmental Ethics 18, 27-56.
- Chesbrough H. (2010). Business model innovation: Opportunities and barriers. Long Range Planning 43, 354-363.
- European Commission (2012). A decade of EU funded low input organic agricultural research 2000 to 2012. Research and Innovation. Brussels.
- Hamm U., Gronefeld, F. (2004). The European market for organic food - revised and updated analysis. OMIaRD vol. 5. School of Management and Business, University of Wales, Aberystwyth.
- Hirata M., Takeno N. (2014). Do cattle (*Bos taurus*) retain an association of a visual cue with a food reward for a year? Animal Science Journal 85, 729-734.
- Lachman G. (2007). Rudolf Steiner: An introduction to his life and work. New York. Jeremy P. Tarcher/ Penguin.
- Offermann F., Nieberg H. (2000). Economic performance of organic farms in Europe. Organic Farming in Europe: Economics and Policy, Vol. 5, University of Hohenheim, Stuttgart.
- Skrzypek R., Osieglowski S., Hofmański D., Grzymisławska M., Grzymisłowski S. (2003): Biological and economic evaluation of milk replacers for calves. Annals of Animal Science 3, 127-136.
- Skrzypek R., Wójtowski J., Fahr R.-D. (2004). Factors affecting somatic cell count in cow bulk tank milk – a case study from Poland. Journal of Veterinary Medicine A, 51, 127-131.
- Vaarst M., Roderick S., Lund V., Lockeretz W. (red.) (2004). Animal Health and Welfare in Organic Agriculture. CABI Publishing, Wallingford–Cambridge.
- Yun J., Swan K.-M., Farmer C., Oliviero C., Peltoniemi O., Valros A. (2014). Parturition nest-building has an impact on postpartum nursing performance and maternal behavior in early lactating sows. Applied Animal Behaviour Science 160, 31-37.