

SYLLABUS

Name of the course (as specified in the approved curriculum) Module 5 – Ecology in Animal Husbandry		Number of ECTS credits 7	
Name of the course in Polish Moduł 5 – Ekologia w Hodowli Zwierząt			
Unit providing the course Department of Zoology Department of Genetics and Animal Breeding Department of Animal Breeding and Product Quality Assessment			
Course coordinator Dr hab. inż. Agnieszka Ludwiczak			
Field of study Animal Production Management	Level II – master studies	Profile Academic-general	Semester 2
TYPE OF CLASSES AND COURSE LOAD (Classes with teacher and student's own work)			
Mode of studies: full-time		Form of study: part-time	
- lectures	30	- lectures	-
- practical classes	40	- practical classes	-
- field classes	10	- field classes	-
- labs	0	- labs	-
- consultations	5	- consultations	-
- own student's work	60	- own student's work	-
- others	25	- others	-
Total number of hours		170	Total number of hours
OBJECTIVE OF THE COURSE			
The student will gain comprehensive theoretical and practical knowledge regarding sustainable animal farming, certified ecological husbandry, with particular reference to the interactions among husbandry, welfare, and behavior, as well as the comparison between factory farming and alternative farming systems, the preservation of the natural environment, and product quality. The student will also possess knowledge, skills, and social competencies in actively participating in the creation and development of rural areas, as well as improving human life quality in the context of ecological trends in agriculture, with particular reference to extensive farming.			
TEACHING METHODS			
The courses will be performed within five subjects: Conservation of animal genetic resources – subject 1, Genetic management of small populations – subject 2, Welfare of farmed animals – subject 3, Behaviour of animals – subject 4, Sustainable animal farming and ecological farms – subject 5. They will have the following forms: lectures with multimedia presentations, interactive classes with multimedia presentations, and a field study on farms – examples of factory farms vs. extensive systems. Preparation of a phased project verified by the teacher. Classes can be held using tools and platforms that facilitate remote organization of meetings, distance learning, and verification of learning outcomes. The practical courses can take place outside the PULS premises.			
Course learning outcomes			The reference to the study field learning outcomes

<p style="text-align: center;">Knowledge</p>	<p>O1 – the advanced methodology used in animal breeding and production, as well as the rules of processing and marketing of animal-origin products</p> <p>O2 – profoundly, the control systems of animal products and feed materials processing in the EU countries, as well as the marketing rules</p> <p>O3 – issues related to the behaviour and welfare of animals, including animal-environment interaction and its implications on the ecosystems, biodiversity, and environmental pollution, as well as EU legal regulations on ecological farming, allowing the independent management of a certified ecological farm or any other ecological agricultural activity</p> <p>O4 – in an advanced degree, on multi-dimensional animal nutrition and its impact on the environment and animal welfare, including physiology, metabolic disorders prevention, methods of monitoring behaviour, as well as the latest technologies and nutritional techniques</p> <p>O5 – the impact of various management practices on animal health, productivity, and the profitability of farming</p>	<p>AP2A_W02 AP2A_W08 AP2A_W09 AP2A_W11 AP2A_W13</p>
<p style="text-align: center;">Skills</p>	<p>O6 – search, critically analyze, and interpret information from literature, databases, and other sources related to animal science, and present this knowledge and communicate with various stakeholders in oral, written, and graphical form</p> <p>O7 – fluently use scientific literature in selected areas of animal science and discuss these topics with specialists from various fields using foreign congress language according to requirements set out for B2+ level of the Common European Framework of Reference for Languages, with particular reference to vocabulary in the field of animal science</p> <p>O8 – apply modern techniques and technologies in animal husbandry and breeding, set up, use, and manage a quality assurance system in agricultural enterprises</p> <p>O9 – manage one's own business in the rural area and analyze the feed market and economic conditions affecting its changes</p> <p>O10 – plan and implement an economic evaluation of the correctness of the performed eco-certified animal husbandry task or any other ecological project associated with practical ecological farming</p> <p>O11 – organize the work of the animal keepers, arrange feed base for different species of animals, properly feed animals, lead production of feed mixes and premixes of high quality, and their distribution according to the requirements of the Feed Law</p>	<p>APA2_U01 APA2_U02 APA2_U05 APA2_U07 APA2_U14 APA2_U15</p>
<p style="text-align: center;">Social competences</p>	<p>O12 – lifelong learning and updating the cognitive skills, as well as to inspire and organize the learning process of other people; to demonstrate a creative attitude; to think and act in an entrepreneurial way</p> <p>O13 – take the ethical and social responsibility for the effects of the activities in the field of animal production with particular reference to domestic animals</p> <p>O14 – assess the risk of the business impact, personal threats, and the safety of colleagues and the environment</p> <p>O15 – take the ethical and social responsibility for the effects of the production of high-quality food, and undertaking the entrepreneurial and creative actions in this respect</p>	<p>APA2_K01 APA2_K03 APA2_K04 APA2_K05</p>
<p>Methods for verifying learning outcomes Lectures – written test. Practical classes – individual tasks. Phased project.</p>		<p>Symbols of course learning outcomes O1 – O15</p>

TEACHING CONTENTS

Lectures. The differences between factory farming and extensive farming systems. The welfare issues associated with factory farming and their reduction through environmental enrichment. The definition and goals of sustainable agriculture. The problems of environmental and nature preservation are linked to certified ecological animal husbandry. Theoretical issues of animal welfare, behaviour, and conservation breeding. Extensive farming and the development of rural areas and agro-tourism. Animals in the programs of rural development. The importance of local and endangered animal populations at risk of extinction in alternative and ecological farming systems. Basic categories of behaviour. Domestication and behaviour. Animal signals and communication.

Classes. The characteristics of factory farming and ecological farming. Evaluation of animal welfare and behaviour based on EU welfare programmes. Development of animal genetic resources preservation programs, including the management of small populations. UE regulations regarding animal production management under intensive and extensive farming conditions. Project. Prepare a phased project of a farm – extensive (ecological) vs. intensive. Highlight the advantages and disadvantages of both farming systems and outline their respective economic benefits.

Forms and criteria for completing the course

Lectures

1. A multiple-choice test
2. Attendance – required more than 50%.

Classes

1. Attendance – according to PULS Studies Regulations and detailed module regulations.
2. Individual tasks assigned by the tutors – subjects 1-4 (see Teaching methods). Phased project and its presentation – subject 5 (see Teaching methods).

Percentage of
a final grade

50% exam
50% practical
classes

Literature list

Core literature

Sustainable pig production systems: https://www.era-susan.eu/sites/default/files/SusPigSys_D5-1_Protocol.pdf

Welfare measures on cattle: <https://hal.inrae.fr/hal-03156407v1/document>

Additional sources

Rabbit Production. 9th Edition. J.I. McNitt, S.D. Lukefahr, P.R. Cheeke, H.M. Patton. CABI Wallingford and Boston 2013
(paper version available on request)

Assessment of welfare in rabbits:

<http://sitesv2.anses.fr/en/system/files/VF%20List%20of%20welfare%20indicators%20rabbits.pdf>

Bolhuis J.J., Giraldeau L.-A.(red.) (2005). The behavior of animals. Mechanisms, function, and evolution. Blackwell Publishing.(paper version available on request)