SYLLABUS

Name of the course (as specified in the approved curriculum) **Module 11 – Consulting in Animal Production**			ECTS **6**
Name of the course in Polish **Doradztwo w Produkcji Zwierzęcej**			
Unit providing the course **Department of Animal Nutrition**			
Course co-ordinator **prof. dr hab. Włodzimierz Nowak**			
Field of study Animal Production Management	Level II – master studies	Profile Academic-general	Semester 4

TYPE OF CLASSES AND COURSE LOAD
(Classes with teacher and own work)

Mode of studies: full time		Mode of studies: part-time	
- lectures	30	- lectures	-
- practical classes	30	- practical classes	-
- field classes	30	- field classes	-
- labs	0	- labs	-
- consultations	5	- consultations	-
- own student's work	35	- own student's work	-
- others	20	- others	-
Total number of hours	150	Total number of hours	-

OBJECTIVE OF THE COURSE

This module is designed to provide students with theoretical and practical knowledge about management practices in dairy cattle, swine, and poultry. After completing the module, students are prepared to begin basic extension work in animal production.

TEACHING METHODS

Lectures, exercises, reports, and practical classes on farms.
Preparation of a phased project verified by the teacher.

	Course learning outcomes	The reference to field of study outcomes
Knowledge	O1: the advanced applied knowledge of animal nutrition and physiology, metabolic disorders, prevention methods, and monitoring behavior and welfare. O2: an advanced degree, the rules of the usage of technical devices in feed mills, as well as the methodology of research used in the analyses of feed materials, the current state of the law related to the quality and hygiene of feed and their sources, and understands the practical application of this knowledge. O3: aspects related to diagnostic methods, techniques, systems, and technologies used in livestock production, as well as processing of raw animal origin materials, and practical implementation of this knowledge.	AP2A_W02 AP2A_W08 AP2A_W09 AP2A_W11 AP2A_W12 AP2A_W13
Skills	O4: calculate diets and feed doses using computer software, e.g., use of nutritional value tables of feed materials, estimate their nutritional value with equations. O5: analyze the feed production technology, as well as diagnose problems in terms of its quality and safety; is able to perform chemical analyses used in the feed industry, and plan the turnover of feed raw materials. O6: apply modern techniques and technologies in animal husbandry and breeding, set up, manage, and analyze assurance system quality in agricultural enterprises. O7: manage their own business in rural areas and analyze the feed market and the economic conditions affecting it.	AP2A_U01 AP2A_U02 AP2A_U04 AP2A_U05 AP2A_U07 AP2A_U13 AP2A_U15

Social competence	O8: understands the need for lifelong learning and updates its cognitive skills, while also inspiring and organizing others' learning. It possesses a creative attitude and can think and act in an entrepreneurial manner. O9: organizes the work of the animal caretakers, arranges a base feed for different species of animals, takes measures for proper animal nutrition, is aware of the responsibility for the production of mixed feed and premixes of high quality, and their distribution according to the requirements of the Feed Law. O10: aware of the importance of societal, professional, and ethical aspects of ecological farming methods, with particular reference to domestic animals.	AP2A_K01 AP2A_K03 AP2A_K04 AP2A_K05

Methods for verifying learning outcomes	Symbols of course learning outcomes
Practical classes – individual tasks. Phased project. Written exam (test).	O1 – O10

TEACHING CONTENTS

Content of lectures

Dairy cows: models of extensions on dairy farms, cows nutrition in dry period and lactation: energy, protein, minerals and vitamins, metabolic diseases diagnosis and prevention, fertility indices interpretation, metabolic blood profile interpretation, collecting data on farm, data integration, preparing report including precise practical recommendations,

Poultry production: bird welfare analyses, nutrition and environmental requirements, key management points, water quality, hygiene management,

Pig herd management: practical feeding piglets and weaners, diseases caused by feeding, welfare –methods of evaluation, extension work, selection, collecting, and data interpretation,

Content of classes - silage analysis, sampling, sensual and chemical analysis (lab work), pH, ammonia organic acids, feed value and quality of silage – practical interpretation, milk composition - interpretation of monthly reports – milk yield and chemical composition (individual and herd data), mineral nutrition, infra red method in forage analysis (prespectives), collecting data during farm visit – phased project preparing – team work.

Management and extension methods in poultry rearing, assessment of bird physical condition, assessment of bird uniformity, organization of biosecurity on farm, environmental conditions in production buildings, gut health as a key point in successful production in conventional and organic systems; sampling of biological material (tissues and blood) for microbiological and histological analyses - report preparing after herd visiting – teamwork.

Pig herd extension and management (methods and models), practical feeding piglets and weaners, diseases caused by feeding, welfare –methods of evaluation, extension work, collecting and data interpretation, phased project preparation – team work.

Forms and criteria for completing the course	**Percentage of a final grade**
Assignments, phased project	40%
Exam	60%

Literature

Core literature:

Commercial Poultry Nutrition, Steven Leeson and John Summers, 2012
Nutrition Experiments in Pigs and Poultry, Michael Bedford, Mingan Choct, Helen Massey, 2016
Breeder Management and Nutrition, Buyrse, Durax, Peris, Romero Sanchez, 2022

Additional sources:

The Mineral Nutrition of Livestock, Eric John Underwood, 2010
Nutrient Requirements of Dogs and Cats, NRC 2006
Nutrient Requirements of Swine, NRC 2012
Journal of Dairy Science https://www.journalofdairyscience.org/
Hoard's Dairyman - monthly https://hoards.com/