SYLLABUS

Name of the course (as specified in the approved curriculum) Module 11 – Farm Management			ECTS 6
Name of the course in Polish Zarządzanie produkcją zwierzęcą			
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	45	- field classes	-
- labs	0	- labs	-
- consultations	5	- consultations	-
- own student's work	35	- own student's work	-
- others	5	- others	-
Total number of hours	150	Total number of hours	-

OBJECTIVE OF THE COURSE

This module provides students with an overview of animal farming, focusing on management practices, animal nutrition, health, breeding, husbandry, disease prevention, and EU legal regulations for dairy cattle, swine, and poultry. After completing the module, the student understands the management applied to the farm.

TEACHING METHODS

Lectures, exercises, reports, and practical classes on farms.

	Course learning outcomes	The reference to field of study outcomes
Knowledge	O1: the advanced methodology used in animal breeding, production, as well as the processing and marketing of animal-origin products. 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 the processing of raw animal origin materials, and the practical implementation of this knowledge.	AP2A_W02 AP2A_W08 AP2A_W11 AP2A_W12 AP2A_W13
Skills	O4: development of herd management plans, calving/farming schedules, and production volume planning. O5: understanding the principles of nutrition optimization, feed composition supervision, and animal nutrition (precision feeding). O6: managing farm infrastructure, maintenance of livestock buildings, ventilation systems, feeding, and watering; introducing automation in animal production and modern herd management systems (RFID monitoring, intelligent livestock buildings). O7: understanding the basics of production profitability analysis, feed and energy cost optimization. O8: managing waste in animal production, and managing slurry/manure in accordance with environmental regulations.	AP2A_U01 AP2A_U02 AP2A_U04 AP2A_U05 AP2A_U07 AP2A_U15

Social competence	O9: 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. O10: 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. O11 - 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

Methods for verifying learning outcomes	Symbols of course learning outcomes
Practical classes – individual tasks. Written exam (test).	O1 – O11

TEACHING CONTENTS

Content of lectures

Dairy cows: calves and heifers rearing, cows nutrition in the dry period and lactation, diagnostic tools to estimate dairy cow nutrition behavior - rumination, locomotion index, body condition score BCS, physical characteristics of dairy cow diets (Fe-NDF), manure analysis (pH, manure scanner), fertility, and blood indices interpretation,
Poultry: bird welfare, environmental requirements, key management points, requirements for males and females during rearing, water quality, hygiene management,
Pigs –practical feeding piglets and weaners, diseases caused by feeding, welfare–methods of evaluation,
Content of classes - milk composition as a mirror of the metabolic status of dairy cows, interpretation of monthly report from PFHBiPM, sampling and sensory and chemical silage analysis (practical lab work): pH, ammonia, nitrate and nitrite, organic acids, NIRS spectroscopy as a modern technique of feed analysis (practical lab work), welfare definition EU legislation and standards, characteristic of pigs behavior, welfare indicators, management of poultry rearing, assessment of bird physical condition, assessment of bird uniformity, organization of farm bioasecuration, management of birds in prelaying and laying period, 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.

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/