załącznik nr 2 do uchwały Rady Szkoły Doktorskiej UPP nr 1/P/2023

SYLLABUS – PULS Doctoral School

Name of the course (as specified in the approved program): **Animal Production -part 3**	
Name of the course in Polish: **Produkcja zwierzęca -cześć 3**	
Unit providing the course (Department): **Department of Animal Nutrition**	
Course leader: **Prof. dr hab. Włodzimierz Nowak**	
Discipline: **Animal science and fisheries**	Semester: **4**

TYPE OF CLASSES:
(course load)

- Lectures	**5**
- Practical classes	**7**
- Self-study	**12**
Total number of hours:	**24**

OBJECTIVE OF THE COURSE:

Course is deigned to present actual scientific and practical data focused on management practices includes diagnosis and prevention of metabolic disorders in dairy cattle and pigs and relation between nutrition and fertility.

TEACHING METHODS:

- Multimedia presentations.
- Educational film screenings, e.g., "From Feed to Milk"
- Discussion panels
- Problem-solving

EDUCATION OUTCOMES*	Reference to education outcomes of the PULS Doctoral School
In the area of knowledge (PhD students know and understand): 1. world scientific literature on the diagnosis and prevention of hypocalcaemia in pigs and cattle, ketosis and subclinical acidosis, displacement of the ruminal abomasum in dairy cows, assessment of the metabolic status of calves, heifers of dairy cows and pigs 2. The latest theories and trends in the relationship between nutrition and fertility in dairy cows and nutrition and health disorders in pigs. Creating original research concepts and their scientific interpretation.	(P8U_W_1) (P8U_W_2)
In the area of skills (PhD students know how to): 3. apply knowledge in the process of creative formulation of their research problems 4. transfer research results to practice with the economic analyses	(P8U_U_1) (P8U_U_3)
In the area of social competencies (PhD students are capable to): 5. initiate actions for the public good 6. promote appropriate models of teamwork -	(P8U_K_3) (P8U_K_4)

Methods of evaluation of outcomes achievement:

Projects (teamwork) - practical knowledge: learning outcomes 1, 2, and 6.
Minutes of final assignments - pigs, written test 3, 4, and 5

* efekty uczenia się stanowią Załącznik nr 1 do Regulaminu Szkoły Doktorskiej Uniwersytetu Przyrodniczego w Poznaniu, który stanowi załącznik do uchwały nr 44/2021 Senatu UPP

TEACHING CONTENT:

- Dairy Cows: Diagnostic tools for assessing dairy cows' feeding behavior – rumination, locomotion index, BCS body condition score, physical characteristics of dairy cow diets (fe-NDF), fecal analysis (pH, fecal scanner), interpretation of fertility and blood indices, hypocalcemia, SARA, ketosis (mode of action) – diagnosis and prevention.
- Pigs: causes, course, and mechanism of metabolic diseases in pigs, disease identification and prevention. Metabolic diseases and pig welfare.
- Content of exercises (labs) – milk composition as a reflection of the metabolic status of dairy cows, interpretation of the monthly PFHBiPM report, metabolic status – blood analyses – interpretation of results.
- Independent case analysis of metabolic diseases in pigs.

The course completion criteria and methods:	**Percent of a final grade:**
Format - Participation in the discussion - Test	 80% 20%
Criteria - 80% on the test - Attendance at least 80% - Active participation in class, discussion, and problem-solving	
☒ **pass (Z)** ☐ **course credit with a grade** ☐ **examination**	

RECOMMENDED LITERATURE:

Reading and analysis of original and review articles "ongoing" in:
- Journal of Dairy Science -
- Animal Feed Sciences and Technology
- Animal
- "Pig Signals" by Jana Hulsen, Keesa Scheepens; APRA, 2014
- Literature listed in the presentation

załącznik nr 2 do uchwały Rady Szkoły Doktorskiej UPP nr 1/P/2023

* efekty uczenia się stanowią Załącznik nr 1 do Regulaminu Szkoły Doktorskiej Uniwersytetu Przyrodniczego w Poznaniu, który stanowi załącznik do uchwały nr 44/2021 Senatu UPP