

SYLLABUS – PULS Doctoral School

Name of the course (as specified in the approved program): Experiments and data analysis in Animal Sciences	
Name of the course in Polish: Doświadczenia i analiza danych w naukach o zwierzętach	
Unit providing the course (Department): Department of Genetics and Animal Breeding	
Course leader: dr hab. Ewa Sell-Kubiak	
Discipline: Animal science and fisheries	Semester: 2
TYPE OF CLASSES: (course load)	
- Practical classes	12
- Self-study	3
Total number of hours:	15
OBJECTIVE OF THE COURSE:	
The aim of the course is to familiarize Ph.D. students with the principles of planning experiments and the selection of analytical methods, when analyzing the outcomes of experiments in animal sciences.	
TEACHING METHODS:	
Lecture, Talk, Demonstrations, Practical Method, Project Method, Problem Method, Case Method	
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 concerning specific problems related to a given discipline along with the resulting implications for practice 2) the latest theories and trends in disciplines, within which education was offered at the Doctoral School, thus facilitating the creation of 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) innovatively solve research tasks using independently gained knowledge concerning state-of-the-art methods and research tools	(P8U_U_1) (P8U_U_2)
In the area of social competencies (PhD students are capable to): 5) independently plan research and independently broaden the existing body of scientific literature 6) creatively solve challenges in professional and public life, considering their ethical aspects	(P8U_K_1) (P8U_K_2)
Methods of evaluation of outcomes achievement:	
Active participation, presence, and overall performance during classes. Final exam. - effects no 1,2,3,4,5,6	
TEACHING CONTENT:	
<ul style="list-style-type: none"> - data handling, - data visualization, - experimental design: <ul style="list-style-type: none"> • number of animals/samples/replicates, • research designs examples vs. observational • study, • power analysis. - principal statistical analyses/basics of hypothesis testing. 	
The course completion criteria and methods: Exam Criteria • Attendance: at least 80%	Percent of a final grade: 100%

* 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

<p>• Active participation (participation in discussions, answering lecturer's questions)</p> <p><input type="checkbox"/> pass (Z) <input type="checkbox"/> course credit with a grade <input checked="" type="checkbox"/> examination (note)</p>	
<p>Literature:</p> <p>Quick M. John, Statistical Analysis with R, Packt Publishing, 2010</p>	

RECOMMENDED LITERATURE:

Quick M. John, Statistical Analysis with R, Packt Publishing, 2010

Attachment 1 to The Regulations of the Poznań University of Life Sciences Doctoral

School EDUCATION OUTCOMES of the Poznań University of Life Sciences Doctoral

School

Graduates from the Poznań University of Life Sciences Doctoral School, upon completion of the specified education program and receiving their PhD degree diploma, will have attained the following education outcomes in the area of knowledge, skills, and social competencies.

1. In the area of knowledge graduates (P8U_W) know and understand:

- 1) world scientific literature concerning specific problems related to a given discipline along with the resulting implications for practice (P8U_W_1)
- 2) the latest theories and trends in disciplines, within which education was offered at the Doctoral School, thus facilitating the creation of original research concepts and their scientific interpretation (P8U_W_2)
- 3) principles of planning and financing of research and evaluation of projects (P8U_W_3)
- 4) aspects concerning intellectual property and principles of confidentiality related to scientific and academic activity (P8U_W_4)

2. In the area of skills graduates (P8U_U) know how to:

- 1) apply knowledge in the process of creative formulation of their research problems (P8U_U_1)
- 2) innovatively solve research tasks using independently gained knowledge concerning state-of-the-art methods and research tools (P8U_U_2)
- 3) transfer research results to the economic sphere (P8U_U_3)
- 4) independently plan and realize their scientific development, as well as inspire and/or organize the development of others (P8U_U_4)
- 5) give classes and lectures and verify taught content (P8U_U_5)

3. In the area of social competencies graduates (P8U_K) are capable to:

- 1) independently plan research and independently broaden the existing body of scientific literature (P8U_K_1)
- 2) creatively solve challenges in professional and public life, considering their ethical aspects (P8U_K_2)
- 3) initiate actions for the public good (P8U_K_3)
- 4) promote appropriate models of teamwork (P8U_K_4)
- 5) maintain and promote the importance and role of the intellectual community in social life (P8U_K_5)