SYLLABUS

Name of the course (as specified in the approved curriculum) Animal Physiology				Number of ECTS credits 5
Name of the course in Polish Fizjologia Zwierząt				
Unit providing the course Department of Animal Physiology and Biochemistry				
Course co-ordinators Dr hab. Marek Skrzypski, Prof. UPP; Dr hab. Paweł A. Kołodziejski, Prof. UPP.				
Field of study Animal Production Management		Level II – master studies	Profile Academic-general	Semester 1

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

Mode of studies: full-time		Mode of studies: part-time	-
- lectures	10	- lectures	-
- practical classes	0	- practical classes	-
- field classes	0	- field classes	-
- labs	40	- labs	-
- consultations	5	- consultations	-
- own student's work	65	- own student's work	-
- others	5	- others	-
Total number of hours	125	Total number of hours	-

OBJECTIVE OF THE COURSE

Introduction to basic laboratory methods; Physiology of animal cells; Cardiovascular System: Blood; Cardiovascular System: The Heart and Blood Vessels, Circulation, Respiratory System; The Digestive System; The Reproductive System and lactation; Urinary system; Physiology of muscles; Endocrine system: hormones; Comparative physiology;

TEACHING METHODS

Lectures: Presentations, discussion, questions and discussion, and solving current problems
Labs: Presentations, performing basic physiological experiments, discussions, questions, and tutorial movies.

	Course learning outcomes	The reference to the study field learning outcomes
Knowledge	O1: Role and composition of blood: morphological elements of blood, the role of blood cells, immunological aspects of blood circulation O2: Describe the differences between types of blood vessels. Regulation of respiration and circulation, the mechanism of respiration O3: Physiology of the digestive system in different breeding animals, role of digestive enzymes, absorption of sugars, fat, and proteins. Effect of nutrition on metabolism and pathophysiology. O4: Define fertilization, recall the fundamentals of lactation, the role of reproductive hormones, physiology of gonads O5: Endocrine system in animals. O6: Physiology of muscles, metabolic differences between fibre types, mechanism of contraction and relaxation. O7: Physiology of the urinary system.	AP2A_W10 AP2A_W11

Skills	O8: Conduct systematic searches, critically evaluate and interpret information from scientific literature, databases, and other relevant sources related to animal physiology, and effectively present and communicate this knowledge to diverse stakeholders in oral, written, and graphical formats. O9: Prepare and revise experimental reports, design and conduct physiological experiments (e.g., measurement of digestive enzyme activity), and effectively present the results in oral form.	AP2A_U01 AP2A_U02 AP2A_U03
Social competences	O10: Recognizes the importance of continuous professional development and actively enhances their knowledge and skills, while motivating and supporting others in the learning process. Demonstrates creativity, initiative, and the ability to think and act in an entrepreneurial way. O11: Demonstrates the ability to work effectively in a team, assuming various roles, including that of a team member and a leader, while showing responsibility, effective communication skills, and the ability to organize and coordinate tasks to achieve common goals.	AP2A_K01 AP2A_K02

Methods for verifying learning outcomes	Symbols of course learning outcomes
Practical classes – test, oral assignment. Written exam.	O1-O11

TEACHING CONTENTS

Lectures will cover animal physiology and the different physiological systems (reproductive, cardiovascular, digestive, and endocrine).
Labs will include practical experiments that will consolidate and verify acquired knowledge. During the classes, students become acquainted with the latest methods of physiological research and the equipment used in this field. Students are introduced and work with Lt LabStation a lab-based learning platform.

Forms and criteria for completing the course	Percentage of a final grade
Attendance and participation.	20%
Achieving a minimum passing grade (labs, and exam).	80%

Literature list

Core literature:

"Anatomy and Physiology of Farm Animals" - Rowen D. Frandson, W. Lee Wilke, Anna Dee Fails
https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://salehsalmanblog.files.wordpress.com/2016/01/01-anatomy-and-physiology-of-farm-animals-7th-edition1.pdf

Additional sources

Scientific database:, Scopus, NCBI (eg. PubMed), Web of Science, Tutorial movies
Website: https://www.rspca.org.uk, https://www.criver.com, https://www.jax.org/

"Cunningham's Textbook of Veterinary Physiology" - Bradley G. Klein
https://share.google/nodf5CXY9BP1FRcde

Guide For the care and use of Laboratory Animals Committee for the Update of the Guide for the Care and Use of Laboratory Animals
https://share.google/D6rqOz4SQPoyeeJv8

"Pathology of Laboratory Animals" - Floris M. Garner, Thomas Carlyle Jones, Kurt Benirschke