

COURSE LAYOUT

1. GENERAL

SCHOOL	School of Animal Biosciences		
DEPARTMENT	Department of Animal Science		
STUDY LEVEL	Undergraduate		
COURSE CODE	0004	SEMESTER	4th
COURSE TITLE	NUTRITIONAL PHYSIOLOGY OF ANIMALS		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	ECTS
Theory		4	4
Laboratory Practicals		2	2
			6
COURSE TYPE (Foundation course, General knowledge, Scientific area, Developing skills)	Scientific area		
PREREQUISITES	Biochemisty		
LANGUAGE	Greek		
IS THE COURSE OFFERED for ERASMUS STUDENTS?	No		
COURSE WEB PAGE	https://mediasrv.aua.gr/eclass/courses/EZPY178/		

2. LEARNING OUTCOMES

Learning Outcomes
General Competence
<p>The course " Nutritional Physiology of Animals" aims to provide students with theoretical and practical knowledge of modern concepts related to a) feed intake and digestion and absorption, b) metabolism of energy, proteins and other nutrients (e.g. inorganic elements and vitamins), c) the biological value of proteins, d) understanding of animal requirements for energy and nutrients based on the animal's characteristics, type of production and physiological stage, and e) mathematical models for estimating the nutritional value of animal feed.</p> <p>The laboratory practicals aim to further strengthen the theoretical background and further assist students in understanding how the information on dietary value of animal feeds and the knowledge of animal requirements per production stage is a pre-requisite for the formulation of optimal diets to feed the animals.</p>
<ul style="list-style-type: none"> • Autonomous work • Teamwork • Decision making • Work in a multidisciplinary environment • Production of new research ideas • Search, analysis and synthesis of data and information with the use and the required technologies

3. COURSE CONTENT

- Nutrient composition of animal body and feeds
- Digestive enzymes
- Feed intake
- Nutrient digestion and absorption in monogastics and ruminants
- Feed digestibility
- Metabolism
- Nutrient and Energy balance in the animal
- Dietary and biological value of nitrogenous substances and crude protein
- Prediction models of nutritional value of feeds
- Animal requirements per species, physiological stage and productivity

4. TEACHING and LEARNING METHODS - Evaluation

TEACHING METHOD	In class, face to face and via specialized teaching platforms (e.g. Open eClass, MS teams)	
USE OF INFORMATICS and COMMUNICATION TECHNOLOGIES	PowerPoint and video presentations. Communication with students via e-mail. Teaching support through access to the e-class platform, to on-line databases and Specialized Software etc.	
TEACHING ORGANISATION (Lectures, individual or group assignments, field trips, individual study et.c.)	Activities	Workload per semester
	Lectures - Laboratory practice	78
	Literature search, study and analysis	47
	Writing assignments	25
	Total Course (25 hours workload per credit unit)	150
STUDENTS EVALUATION	Assignments Exams Marking Scale: 0-10. Minimum Passing Mark: 5. The students are being informed on the evaluation criteria during their first lesson of the semester.	

5. BIBLIOGRAPHY

Φυσιολογία Θρέψης Παραγωγικών Ζώων, Γ. Ζέρβα, Εκδόσεις Αθ. Σταμούλη, 2005
Animal Nutrition, Mc Donald, P., Edwards, R.A., Greenhalgh, J.F.D. and Morgan, C.a. 2002. Prentice Hall, Pearson Education Limited, ISBN 0 582 41906 9
 Mutch D.M., Wahli W and Williamson G (2005) Nutrigenomics and nutrigenetics: the emerging faces of nutrition The FASEB Journal 19: 1602-1616.

- *Relevant Scientific Journals:*

Animal
 Animal Feed Science and Technology
 Animal Nutrition
 Animal production Science
 EFSA Journal

Journal of Animal Science
Journal of Animal Science and Biotechnology
Livestock Science
PLoS ONE
Poultry Science
Trends in Biotechnology