

COURSE CURRICULUM

1. GENERAL INFORMATION

SCHOOL	ANIMAL BIOSCIENCES		
TEACHING DEPARTMENT	ANIMAL SCIENCE (DAS)		
STUDY LEVEL	UNDERGRADUATE		
COURSE CODE	34	SEMESTER	8th
DEPARTMENT TO WHICH IS OFFERED:	DAS		
COURSE TITLE	MONOGASTRICS NUTRITION		
INDEPENDENT TEACHING ACTIVITIES <i>In case ECTS are awarded for distinct parts of the course e.g. Theory Lectures, Laboratory Practicals etc. If ECTS are awarded uniformly for the entire course, give the weekly teaching hours and total ECTS.</i>		WEEKLY TEACHING HOURS	ECTS
Theory Lectures		3	3
Laboratory practicals		3	3
TOTAL		6	6
Add lines if necessary. Teaching and Learning methods should be described in detail in section 4.			
COURSE TYPE <i>Background, Basic knowledge, Field of Science, Skill development</i>	Field of Science (theory), Skill development (laboratory practicals)		
PREREQUISITES	Feedstuffs and Feedstuffs Technology, Nutritional Physiology		
LANGUAGE	Greek		
IS THE COURSE OFFERED to ERASMUS STUDENTS?	Yes (in English)		
COURSE WEB PAGE (URL)	https://oeclass.aua.gr/eclass/courses/EZPY108/		
INSTRUCTOR(S):	Theory: Pappas A.C., Paraskevas V., Papadomichelakis G. Laboratory practicals: Papadomichelakis G., Pappas A.C.		

2. LEARNING OUTCOMES

Learning outcomes

Describe the learning outcomes of the course, the specific knowledge, skills and competences of an appropriate level that students will acquire after successfully completing the course.

Refer to Appendix A.

- *Description of the level of learning outcomes for each course of study in line with the European Higher Education Area Qualifications Framework*
- *Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning*
- *and Annex B*
- *Learning outcomes Writing Guide*

The course is essential to understand the basic definitions and principles of monogastrics nutrition. In particular, lectures and practicals aim to:

- The intensive study on monogastric energy and nutrient requirements depending on the animal species and production phase, as well as the feeding regimes so as to meet those requirements.
- Select the appropriate feedstuffs for each species of monogastrics.
- Study the effects of nutrients on metabolism and several physiological functions in order to promote health, optimize performance, and improve product quality (by fortifying the products with functional ingredients).
- Learn diet formulation techniques by using linear programming software.
- Following the lectures and laboratory practicals, the students will:
- Possess full knowledge of the basic principles in monogastrics nutrition.

<ul style="list-style-type: none">Be able to use the appropriate tools and techniques, and combine with all the necessary data, so as to formulate least-cost diets for each species of monogastrics.		
<p>General competencies</p> <p><i>Considering the general competencies that the graduate (as reported in the Diploma Supplement and listed below) must have acquired, describe in which one(s) the course is intended.</i></p> <table><tr><td><p><i>Search, analyze and synthesize data and information, using the necessary technologies</i></p><p><i>Adapt to new situations</i></p><p><i>Decision making</i></p><p><i>Autonomous work</i></p><p><i>Teamwork</i></p><p><i>Work in an international environment</i></p><p><i>Work in an interdisciplinary environment</i></p><p><i>Production of new research ideas</i></p></td><td><p><i>Project design and management</i></p><p><i>Respect for diversity and multiculturalism</i></p><p><i>Respect for the natural environment</i></p><p><i>Demonstration of social, professional and moral responsibility and sensitivity to gender issues</i></p><p><i>Exercise of criticism and self-criticism</i></p><p><i>Promotion of free, creative and inductive thinking</i></p></td></tr></table>	<p><i>Search, analyze and synthesize data and information, using the necessary technologies</i></p> <p><i>Adapt to new situations</i></p> <p><i>Decision making</i></p> <p><i>Autonomous work</i></p> <p><i>Teamwork</i></p> <p><i>Work in an international environment</i></p> <p><i>Work in an interdisciplinary environment</i></p> <p><i>Production of new research ideas</i></p>	<p><i>Project design and management</i></p> <p><i>Respect for diversity and multiculturalism</i></p> <p><i>Respect for the natural environment</i></p> <p><i>Demonstration of social, professional and moral responsibility and sensitivity to gender issues</i></p> <p><i>Exercise of criticism and self-criticism</i></p> <p><i>Promotion of free, creative and inductive thinking</i></p>
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<ul style="list-style-type: none">Search, analyze and synthesize data and information using the necessary technologiesPromotion of free, creative and inductive thinking		

3. COURSE CONTENT

<ul style="list-style-type: none"> Pig nutrition (principles and objectives): Effects of nutrition on pig productive performances. Factors affecting the energy, protein, amino acid, mineral and vitamin requirements in pigs. Diet formulation and feeding techniques in sows, boars and piglets. Systems and feeding techniques in prefattening and finishing pigs). Poultry nutrition: digestive system peculiarities, factors affecting feed intake, diet formulation principles, feeding techniques. Nutrition of layer hens, reproduction birds and broiler chickens. Nutrition of turkeys, ducks, geese, quails, doves, pheasants etc. Effects of diet on meat and egg quality. Rabbit nutrition: digestive system physiological background and peculiarities, diet formulation and feeding techniques during reproduction and growth, effects of diet on meat quality.
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4. TEACHING and LEARNING METHODS - EVALUATION

<p>TEACHING METHOD</p> <p><i>Face to face in classroom, Distance Learning, etc.</i></p>	<p>In classroom (a-Power Point presentations in theory and b-practice on computers in laboratory practicals)</p>	
<p>USE OF INFORMATICS and COMMUNICATION TECHNOLOGIES</p> <p><i>Use of ICT in Teaching, Laboratory Practicals, Communication with Students etc.</i></p>	<ul style="list-style-type: none"> Theory: Use of power point, communication with students via e-mail, support of the learning process via the e-class electronic platform. Laboratory practicals: Linear Programming Software (GL-Feed Formulation) for diet formulation 	
<p>TEACHING ORGANIZATION</p> <p><i>Describe in detail the methods of teaching: Lectures, Seminars, Laboratory Practicals, Field Exercise, Study and Analysis of Bibliography, Tutorial, Practice (Placement), Clinical Exercise, Art Workshop, Interactive Teaching, Educational Visits, Project Work, Authoring, Artistic creation etc.</i></p> <p><i>The student's study hours for each learning activity and hours of non-guided study are indicated so that the total workload at the semester corresponds to the ECTS</i></p>	<p>Activity</p>	<p>Work load (h) per semester</p>
	Lectures in theory	39
	Laboratory practicals: diet formulation principles and techniques, using linear programming software.	39
	Training tours (visits in animal farms).	10
	Individual study of students on diet formulation	62
	Total work load (25 h work load per ECTS)	150

<p align="center">STUDENTS' EVALUATION</p> <p><i>Description of the evaluation process</i></p> <p><i>Assessment Language, Assessment Methods, Formulation or Conclusion, Multiple Choice Test, Short Response Questions, Test Questions, Problem Solving, Written Work, Reporting, Oral Examination, Public Presentation, Laboratory Work, Clinical Patient Examination, Artistic Interpretation, Other</i></p> <p><i>Identify certain evaluation criteria and state if and where they are accessible by the students.</i></p>	<p>The evaluation on the course's theory consists of final written examination with long-answer questions.</p> <p>I. Theoretical section</p> <p>a) Optional attendance of Lectures by students (progress, assignments, etc.).</p> <p>(b) Final written examination (100%) including development questions.</p> <p>II. Laboratory practical section:</p> <p>(a) Compulsory monitoring of the laboratory exercises by the students, with attendance records,</p> <p>(b) Assessment of skills by solving computer ration training with synthesis of data on animal needs and chemical composition of feed</p> <p>III. The evaluation language is Greek.</p> <p>IV. The evaluation criteria are communicated to the students.</p> <p>V. The final grade results from the scores in the theoretical (50%) and laboratory (50%) part</p>	

5. BIBLIOGRAPHY

Proposed Literature for theory:

(A) Printed Related scientific journals - Publications:

- Kalaisakis P. Applied nutrition of farm animals. Edition 2a 1982, AUA Library.

(B) Digital Educational Materials (e-class):

- Paraskevas B., Lectures, Pig Nutrition (pdf)
- Pappas A.X., Lectures, Poultry nutrition theory 1 (pptx)
- Pappas A.H., Lectures, Poultry nutrition theory 2 (pptx)
- Pappas A.X., Lectures, Poultry nutrition theory 3 (pptx)
- Pappas A.H., Lectures, Poultry nutrition theory 4 (pptx)
- Pappas A.X., Lectures, Poultry nutrition theory 5 (pptx)
- Papadomichelakis G., Rabbit Nutrition Lectures (pdf)

(C) Recommended Textbooks (EUDOXOS):

- Zervas G., Kalaisakis P., Fengeros K. Nutrition of farm animals. Edition b 2004, Stamouli Publications (code 77119062).

- Proposed Literature for laboratory practicals:

(A) Printed Related scientific journals - Publications:

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(B) Digital Educational Materials (e-class):

- Papadomichelakis G., Pig feeding exercises laboratory (pdf)
- Papadomichelakis G., Pig feeding exercises laboratory (docx)
- Papadomichelakis G., Control and correction of rations (docx)
- Papadomichelakis G., Pig ration specifications (docx)
- Papadomichelakis G., GL-Feed formulation User Guide (pdf)
- Pappas A.X., Exercises, Poultry nutrition lab 1 (pptx)
- Pappas A.X., Exercises, Poultry nutrition lab 2 (pptx)
- Pappas A.X., Exercises, Poultry nutrition lab 3 (pptx)

- Pappas A.X., Exercises, Poultry nutrition lab 4 (pptx)
- Pappas A.X., Exercises, Poultry nutrition lab 5 (pptx)

(C) Recommended Textbooks (EVDXOS):

- Zervas G. Diet formulation for productive animals. Edition a 2007, Stamoulis Publications (code 77119049).