

Monogastrics Nutrition [34]

COURSE OUTLINE

(1) GENERAL

SCHOOL	ANIMAL BIOSCIENCES		
ACADEMIC UNIT	DEPARTMENT OF ANIMAL SCIENCE		
LEVEL OF STUDIES	Undergraduate [Required]		
COURSE CODE	34	SEMESTER	9 th
COURSE TITLE	MONOGASTRICS NUTRITION		
INDEPENDENT TEACHING ACTIVITIES TOTAL		WEEKLY TEACHING HOURS	CREDITS
Theory Lectures		3	2.5
Laboratory practicals		3	2.5
TOTAL		6	5
COURSE TYPE	Field of Science (theory), Skill development (laboratory practicals)		
PREREQUISITE COURSES:	Feedstuffs and Feedstuffs Technology, Nutritional Physiology		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK		
IS THE COURSE OFFERED TO ERASMUS STUDENTS:	YES (in English)		
COURSE WEBSITE (URL):	https://oeclass.aua.gr/eclass/courses/EZPY108/		
TEACHING STAFF:	Theory: Mountzouris K., Papadomichelakis G., Pappas A.C. Laboratory practicals: Papadomichelakis G., Pappas A.C.		

(2) LEARNING OUTCOMES

Learning outcomes
Upon successful completion of the course, students will be able (according to Bloom) to: • Understand the basic principles of monogastric nutrition (Knowledge / Comprehension). • Analyze and determine energy and nutrient requirements for different monogastric species according to their production phase (Analysis / Application). • Select appropriate feedstuffs for each monogastric species (Application / Evaluation). • Explain the effects of nutrients on metabolism and physiological functions to promote health, optimize performance, and improve product quality (Knowledge / Comprehension / Application). • Apply diet formulation techniques using linear programming software to create least-cost diets for each species (Application / Synthesis). • Integrate theoretical and practical knowledge to design balanced feeding regimes for monogastric animals (Synthesis / Evaluation).
General Competences
• Search, analyze and synthesize data and information using the necessary technologies • Promotion of free, creative and inductive thinking

(3) SYLLABUS

• 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. • Gut function and health and its importance in the nutrition of monogastric animals. • Nutrigenomics in monogastric animals

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	In classroom (a-Power Point presentations in theory and b- practice on computers in laboratory practicals)	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	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	
TEACHING METHODS	Activity	Semester workload
	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 theory and diet formulation	37
	Course total (25 h of workload per ECTS)	125
STUDENT PERFORMANCE EVALUATION	The evaluation on the course's theory consists of final written examination with long-answer questions. I. Theoretical section a) Optional attendance of Lectures by students (progress, assignments, etc.). (b) Final written examination (100%) including development questions. II. Laboratory practical section: (a) Compulsory monitoring of the laboratory exercises by the students, with attendance records, (b) Assessment of skills by solving computer ration training with synthesis of data on animal needs and chemical composition of feed III. The evaluation language is Greek. IV. The evaluation criteria are communicated to the students. V. The final grade results from the scores in the theoretical (50%) and laboratory (50%) part	

(5) ATTACHED 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):

- Mountzouris K., 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 (EUOXOS):

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