

COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Agricultural Sciences		
ACADEMIC UNIT	Biosystems & Agricultural Engineering		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	BAE_706	SEMESTER	7th
COURSE TITLE	DESIGN AND ORGANIZATION OF FODDER UNITS		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
Lectures		3	
Tutorials		2	
Laboratory		0	
TOTAL		5	5
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Background and Scientific Area		
PREREQUISITE COURSES:	There are no prerequisite courses.		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek. For Erasmus students in English		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)			

(2) LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i>
<p>The purpose of the course is to provide students with the necessary knowledge regarding the design and organization of livestock facilities, which house farm animals of particular interest to Greek livestock farming.</p> <p>Upon successful completion of the course, the student will be able to understand:</p> <ul style="list-style-type: none"> • the practical application of the organization of farm animal populations • the fundamental principles and design criteria of housing areas for each type of farm animal • the importance of the functionality of the housing areas so as to facilitate the work and the well-being of the animals <ul style="list-style-type: none"> • the special importance of the thermal and gaseous environment in the ability of farm animals to produce at their maximum genetic potential
<p>General Competences</p> <p><i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i></p>

<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>Others...</i>
<p>At the end of this course the student will have further developed the following general skills:</p> <p>Search for, analysis and synthesis of data and information, with the use of the necessary technology</p> <p>Adapting to new situations</p> <p>Decision-making</p> <p>Working independently</p> <p>Team work</p> <p>Production of new research ideas</p> <p>Respect for the natural environment</p> <p>Criticism and self-criticism</p> <p>Production of free, creative and inductive thinking</p>	

(3) SYLLABUS

- 1. Cow-farms: Characteristics of animals. Limited and free stalling. Organization of herds. Auxiliary areas of dairy farms. Comparison of the various stall systems. Milking in a special place – Choice of milking parlors.
- 2. Sheep and goat sheds: Design methodology, introduction to design, design of main and auxiliary spaces. Construction elements (e.g. floor, corridors, natural ventilation systems, etc.) of goat and sheep pens.
- 3. Poultry farms: Characteristics of birds. Environmental conditions. Housing of hens for breeding and production of eggs for consumption. Broiler housing. Poultry farm equipment.
- 4. Pig pens: Characteristics of the animal to be housed. Artificial environment conditions. Election of the location of the holdings. Production types and systems. Breeding pigsties. Fattening pigsties. Equipment. .
- 5. Artificial Farm Animal Housing Environment: Psychrometric procedures, Energy exchanges between farm animals and the artificial environment. Calculation of required minimum and maximum ventilation.
Tutorials
- The tutorial exercises aim to familiarize the students with concepts analyzed in the theoretical part.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Lectures in the amphitheatre and laboratory exercises both in the laboratory and in the field.	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> • Use of ICT (power point) in Teaching • Use of ICT (power point) in Tutorial Training • Use of ICT in Communication with students (Learning process support through the electronic platform e-class). 	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i>	Activity	Semester workload
	Lectures	39
	Tutorials	20
	Writing short reports of laboratory exercises- Exams	21

<p><i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	<p>Study hours and preparation for the laboratory exercises and the final examination</p>	45
	<p>Course total</p>	125
<p align="center">STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>1.1. In the examination of the course and tutorial, emphasis will be placed on demonstrating critical thinking skills and justifying the choices they make in each problem.</p> <p>2. The exam in the theory of the course is done with development questions or multiple choice questions that focus on the understanding of the course, giving weight to the student's critical ability..</p> <p>3. Oral exams may take place in cases of students who have been exempted from the writing exams and always the same time and day as the writing exams.</p> <p>4. The above are done in the Greek language. For foreign language students (eg Erasmus students) conducted in English</p>	

(5) ATTACHED BIBLIOGRAPHY (In Greek)

<p>- <u>Suggested bibliography:</u></p> <ol style="list-style-type: none"> 1. Aggarwal A. and R. Upadhyay. 2013. Heat Stress and Animal Productivity. Springer: India. 2. Albright, L. D. 1990. Environment Control for Animals and Plants. ASAE, Michigan. 3. Mount, L. E. (1979). Adaptation to thermal environment. London, UK: Edward Arnold. 4. MWPS (Midwest Plan Service). 1983. Swine Housing and Equipment Handbook, 4th ed. Ames, IA: Iowa State University. 5. University. 6. Pedersen, S., and K. Sällvik. 2002. Heat and moisture production at animal and house levels. In 4th Report of Working Group on Climatization of Animal Houses. Horsens: CIGR. 7. 8. -Συναφή επιστημονικά περιοδικά: 9. Animals, Applied Animal Behavior, Applied Engineering in Agriculture, Biosystems Engineering 10. CIGR Journal, Livestock Science, Poultry Science, Small Ruminant Research, TRANSACTIONS of the ASABE
