

## COURSE OUTLINE

### 1. GENERAL

<b>SCHOOL</b>	AGRICULTURAL SCIENCES		
<b>ACADEMIC UNIT</b>	ANIMAL PRODUCTION, FISHERIES AND AQUACULTURE		
<b>LEVEL OF STUDIES</b>	UNDERGRADUATE		
<b>COURSE CODE</b>	AS_502	<b>SEMESTER</b>	5 <sup>th</sup>
<b>COURSE TITLE</b>	ZOOTECHNICS		
<b>INDEPENDENT TEACHING ACTIVITIES</b> <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>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>	5 (3h-lectures + 2h lab. training)	6	
<b>COURSE TYPE</b> <i>general background, special background, specialised general knowledge, skills development</i>	Special Background		
<b>PREREQUISITE COURSES:</b>	There are no prerequisite courses		
<b>LANGUAGE OF INSTRUCTION and EXAMINATIONS:</b>	Greek, English		
<b>IS THE COURSE OFFERED TO ERASMUS STUDENTS</b>	YES		
<b>COURSE WEBSITE (URL)</b>			

### 2. LEARNING OUTCOMES

#### Learning outcomes

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.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of

*the European Higher Education Area*

- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

After the successful completion of the course, students should be able to

- Know the races and the somatometric characteristics of the farmed animals and birds in Greece
- Choose the race of animals and birds based on the yields desired by the farmer (milk - meat - wool - fur – eggs).
- Be aware of the requirements of each farmed animal and bird and the required livestock work for the good practice of the farm operation.
- Be aware of the importance of animal and bird vaccination programs to livestock maintenance.
- Be aware of the well-being of animals and birds and the legislation that determinates them.

### **General Competences**

*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?*

*Search for, analysis and synthesis of data and information, with the use of the necessary technology*

*Project planning and management*

*Adapting to new situations*

*Respect for difference and multiculturalism*

*Decision-making*

*Respect for the natural environment*

*Working independently*

*Showing social, professional and ethical responsibility and sensitivity to gender issues*

*Team work*

*Criticism and self-criticism*

*Working in an international environment*

*Production of free, creative and inductive thinking*

*Working in an interdisciplinary environment*

*.....*

*Production of new research ideas*

*Others...*

*.....*

- Applying scientific knowledge
- Search, analysis and synthesis of data and information, using the necessary technologies
- Decision-making
- Working independently
- Team work
- Criticism and self-criticism

### **3. SYLLABUS**

In particularly the course is analyzed in follow modules:

1. Importance of primary animal production in the agricultural and national economy. Domestication and origin of farmed animals and birds worldwide.
2. Races of animals and birds farmed in Greece.
3. General reference to the genetic improvement of farmed animals and birds.
4. Busty: Choice of cow race (dairy production - meat production and / or mixed yields), special features of the busty (heating, ventilation) and required livestock works in feeding (rationing and distribution of feed), reproduction (oestric cycle), milking of cows and how to remove waste.
5. Sheepfold: Choice of sheep race (dairy production - meat production and / or mixed yields), special features of the sheepfold (heating, ventilation) and required livestock works in feeding (rationing and distribution of feed), reproduction (oestric cycle), milking of sheep, sheep shearing and how to remove waste.
6. Goat installation: Choice of goat race (dairy production - meat production and / or mixed yields), special features of the goat installation (heating, ventilation) and required livestock works in feeding (rationing and distribution of feed), reproduction (oestric cycle), milking of goat and how to remove waste.
7. Pigsty: Choice of pig race, special features of the pigsty (heating, ventilation) and required livestock works in feeding (rationing and distribution of feed), reproduction (oestric cycle) and how to remove waste.
8. Rabbit installation: Choice of rabbit race (meat production - fur production and / or mixed yields), special features of the rabbit installation (heating, ventilation) and required livestock works in feeding (rationing and distribution of feed), reproduction (oestric cycle) and how to remove waste.
9. Poultry farm: Choice of bird race (meat production – egg production and / or mixed yields), special features of the poultry farm (heating, ventilation) and required livestock works in feeding (rationing and distribution of feed), purchase and / or reproduction of chicks and how to remove waste.
10. Somatometry and individual selection of the farmed animals based on: 1) the particular characteristics of each race (conformation of head, neck and body), and 2) the integrity of the animal (way of moving / walking and posture of the body, absence of wounds in the body and breast malformations).
11. Importance of the vaccination of farmed animals and birds in animal production and national vaccination programs.
12. Usefulness of programs for the creation of a database and proper management of Animal and Poultry Units.
13. "Well being" of animals and birds, related legislation on their living and slaughter. Innovations in the science of Zootechnics in the coming decades.

#### **Laboratory exercises:**

1. Learning differences in races of cows (dairy - meat production and / or mixed yields) farmed in Greece.
2. Learning differences in races of sheep (dairy - meat production and / or mixed yields) farmed in Greece.
3. Learning differences in races of goats (dairy - meat production and / or mixed yields) farmed in Greece.
4. Learning differences in races of pigs farmed in Greece.
5. Learning differences in races of rabbits (meat production - fur production, and / or

- mixed yields) farmed in Greece.
6. Learning the differences in races of hens (meat production – egg production, and / or mixed yields) farmed in Greece.
  7. Learning of animal somatometry and individual selection of the most suitable ones for farming.
  8. Learning of reproduction methods in cows, goats, sheep and pigs.
  9. Learning how to immobilize the animal for vaccination.
  10. Learning how to vaccinate birds.
  11. Demonstration of the use of animal and birds farming programs for the management of rearing units.
  12. Learning on practical aspects of animals and birds well-being and how to slaughter animals and birds.
  13. Learning on practical issues of a modern agricultural economy.

#### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b> <i>Face-to-face, Distance learning, etc.</i>	Face to face	
<b>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</b> <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> <li>• Use of ICT in teaching (Power-Point presentations)</li> <li>• Uploading of lecture slides and other educational material on E-class</li> <li>• Communication with the students through the online platform E-class.</li> </ul>	
<b>TEACHING METHODS</b>  <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>  <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>	<b>Activity</b>	<b>Semester workload</b>
	1. Lectures 3 hours x 13 weeks.	39
	2. Further study, search and study of lecture material, associated with (1) (3 hours x 13 weeks)	39
	3. Laboratory Exercises 2 hours x 13 weeks.	26
	4. Writing of brief reports of laboratory exercises or laboratory examination related to (3) (1 x 6 hrs)	6
	5. Self-assessment exercises in e-class (1 x 6 weeks)	6
	6. Writing of short work presentation (1 x 13 weeks)	13
	7. Hours of study and preparation for laboratory exercises, assessment of progress (s) and final examination	18
	8. Final examination	3

	Course total	150
<p><b>STUDENT PERFORMANCE EVALUATION</b></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>	<ul style="list-style-type: none"> <li>• Greek Language (Teaching, Examination)</li> <li>• English Language (Teaching, Examination)</li> </ul> <ol style="list-style-type: none"> <li>1. Solving Problems Based on Taught (Formative - Concluding) (A)</li> <li>2. Written Report / Oral Report (Concluding) (B)</li> <li>3. Written Final Examination (Concluding) (C)</li> </ol> <p>Each case is graded on a scale of 0-10</p> <p>Final Grade (FG): 0.3A + 0.2B + 0.5C otherwise: Final Grade (FG): 0.3A + 0.7C</p> <p>(C) takes place during the current examination period that the lesson is taught, and its iteration (September) (period where A &amp; B scores are maintained). In case of failures of the course the student repeats the Written Final Examination (C).</p> <p>Students with learning difficulties are examined orally.</p>	

## 5. ATTACHED BIBLIOGRAPHY

### - Suggested bibliography:

- Veterinary Obstetrics and Zootechnics (Horse) Hardcover – 1932, Major Howard N. Beeman (Author), Publisher: American Remount Association; ASIN: B00A3JLTE4
- Methods of instruction in animal husbandary (Zootechny), Charles Sumner Plumb (Author), Publisher: Impr. Polleunis et Ceuterick (1905), Language: English, ASIN: B0008CR332

### - Related academic journals:

- Journal of the Hellenic Veterinary Medical Society
- To Dairy News, Zootechnia 2019 - Dairy News  
[www.dairynews.gr/2019/01/29/to-dairy-news- zootechnia-2019](http://www.dairynews.gr/2019/01/29/to-dairy-news- zootechnia-2019)
- Zootechnia - MeatNews.gr  
<https://meatnews.gr/tag/zootechnia/>
- Zootechnics Research Papers - Academia.edu  
[www.academia.edu/Documents/in/Zootechnics](http://www.academia.edu/Documents/in/Zootechnics)