

## COURSE LAYOUT

### 1. GENERAL

<b>SCHOOL</b>	Animal Biosciences		
<b>DEPARTMENT</b>	Animal Science		
<b>STUDY LEVEL</b>	Bachelor		
<b>COURSE CODE</b>	2995	<b>SEMESTER</b>	7 <sup>th</sup>
<b>COURSE TITLE</b>	Farming of Domestic Ruminants		
<b>INDEPENDENT TEACHING ACTIVITIES</b>		<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>
Theory		3	3
Laboratory Practicals		3	3
			6
<b>COURSE TYPE</b>	Field of Science		
<b>PREREQUISITES</b>	-		
<b>LANGUAGE</b>	Greek		
<b>IS THE COURSE OFFERED for ERASMUS STUDENTS?</b>	Yes (in English)		
<b>COURSE WEB PAGE (URL)</b>	Theory: <a href="https://oeclass.aua.gr/eclass/courses/EZPY104/">https://oeclass.aua.gr/eclass/courses/EZPY104/</a> (in Greek)  Laboratory: <a href="https://oeclass.aua.gr/eclass/courses/EZPY110/">https://oeclass.aua.gr/eclass/courses/EZPY110/</a> (in Greek)		
<b>EDUCATIONAL STAFF</b>	THEORY: M. Charismiadou, P. Simitzis, G. Laliotis  Laboratory: M. Charismiadou, P. Koutsouli, P. Simitzis, G. Laliotis		

### 2. LEARNING OUTCOMES

#### Learning Outcomes

The course "Farming of Domestic Ruminants" aims to familiarize students, in theoretical and practical level, with the contemporary methods applied in husbandry of large and small ruminants.

In particular, lectures and practice focus on the understanding of:

- The necessary conditions for an efficient farming, the possibilities of development and the perspectives of dairy, beef, sheep and goat production through the estimation of the global livestock (live animals, meat and milk production).
- The characteristics of the most common breeds of cow, sheep and goat with the intention of their evaluation through the appropriate breeding systems.
- The factors that influence the conception rate, the duration of gestation and parturition but also the factors used for the estimation of the reproductive potential (prolificacy rate, viability rate, profitability rate).
- The factors that affect the process of milk production, the growth of mammary gland and the development of lactation in ruminants.

<ul style="list-style-type: none"> <li>• The factors that influence carcass and meat production in ruminants.</li> </ul>
<b>General Competences</b>
<ul style="list-style-type: none"> <li>• Individual and group work</li> <li>• Producing new research ideas</li> <li>• Promotion of free, creative and inductive thinking</li> </ul>

### 3. COURSE CONTENT

#### 1. Cattle and beef farming

- Origin. Breeds, cow meat productive, milk productive, dual purpose productive and indigenous breeds.
- Cattle and beef farming in Greece, Europe and Worldwide.
- Management of cattle breeding.
- Cattle reproduction: Body condition, reproductive management during mating and gestation. Cow birth. The care of newborn calf. The nursing calf. Feeding and growth of calf. Reproductive performance of the herd. Troubleshooting in reproductive performance.
- Milk production: Milking. Factors affecting milk production. Milk productive efficiency. Troubleshooting in milk production.
- Fattening calves: conditions of an effective fattening. Weaning. Requirements for calf fattening and different systems. Slaughter conditions and carcass quality. Management of a beef farm enterprise unit.

#### 2. Sheep farming

- Origin, domestication and evolution of sheep and goat. Global animal production and distribution.
- Global meat production, milk and wool production.
- Breeds of milk-, meat-, wool- producing sheep and goats
- Estimation of sheep and goat body condition.
- Reproduction and reproductive control.
- Sheep and goat milk production and quality.
- Growth and fattening. Quality of lamb carcass and meat.
- Genetic improvement. Management of the flock. Productive systems in sheep farming.

### 4. TEACHING and LEARNING METHODS - Evaluation

<b>TEACHING METHOD</b>	In class, face to face.	
<b>USE OF INFORMATICS and COMMUNICATION TECHNOLOGIES</b>	PowerPoint and video presentations. Communication with students via e-mail. Teaching support through access to the e-class platform, to on-line databases etc.	
<b>TEACHING ORGANISATION</b>	<b>Activities</b>	<b>Work load per semester</b>
	Lectures	39
	Laboratory practice	39
	Individual study of students	72
	<b>Total work load (25 h work load per ECTS)</b>	<b>150</b>
<b>STUDENTS EVALUATION</b>	The evaluation on the course's theory consists of: 1. final written examination on the course's theory	

	<p>(80-100%), consisting of:</p> <ol style="list-style-type: none"> <li>I. Evaluation of elements of the course's theory</li> <li>II. Short-answer questions</li> <li>III. Multiple choice questions</li> </ol> <p>2. Personal written essay and its presentation</p> <p>The evaluation on the course's laboratory practice is determined by the final written examination (100%) consists of:</p> <ol style="list-style-type: none"> <li>I. Evaluation of elements of the course's theory</li> <li>II. Short-answer questions</li> <li>III. Multiple choice questions</li> </ol>
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## 5. BIBLIOGRAPHY

### **-Proposed Literature:**

*John Webster (2020): Understanding the Dairy Cow, 3rd Edition, Wiley Blackwell.*

*Yapp W and Nevens W.B. (2017): Dairy Cattle Management : Selection, Feeding And Management. Medtech*

*Crawford B (2022). Dairy Cattle Management. States Academic Press-*

*Fayez I., Marai M., Owen J.B. (2013). New Techniques in Sheep Production*

*Kaushish S.K. (2019): Sheep Production in Tropics and Subtropics*

*Solaiman S.G. (2010): Goat Science and Production*

*Kukovics S. (2023): Goat Science: Environment, Health and Economy*

### **-Related Scientific Journals:**

*Animal Science, Small Ruminant Research, Animals, Animal, Journal of Dairy Science, Journal of Animal Science*

### **-Digital Education Material:**

*Sheep and Goat Production 1: Introduction – Statistics – Breeds*

*Sheep and Goat Production 2: Reproduction – Milk and Meat Production*

*Cattle Production. Lecture notes.*