

## COURSE LAYOUT

### 1. GENERAL

<b>SCHOOL</b>	School of Animal Biosciences		
<b>DEPARTMENT</b>	Department of Animal Science		
<b>STUDY LEVEL</b>	<i>Undergraduate – Optional/elective course</i>		
<b>COURSE CODE</b>	1440	<b>SEMESTER</b>	9th
<b>COURSE TITLE</b>	Livestock Production Systems		
<b>INDEPENDENT TEACHING ACTIVITIES</b>		<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>
Theory		2	2
<b>COURSE TYPE</b> (Foundation course, General knowledge, Scientific area, Developing skills)	Scientific Area Course		
<b>PREREQUISITES</b>	-		
<b>LANGUAGE</b>	Greek		
<b>IS THE COURSE OFFERED for ERASMUS STUDENTS?</b>	No		
<b>COURSE WEB PAGE</b>	<a href="https://mediasrv.aua.gr/eclass/courses/EZPY190/">https://mediasrv.aua.gr/eclass/courses/EZPY190/</a>		

### 2. LEARNING OUTCOMES

<b>Learning Outcomes</b>
<p>The aim of the course is to introduce to the students of the Department of EYP the meaning of the production systems and the importance they have for animal production.</p> <p>The aim of the course is for students to understand the methods of analysis and study of production systems. Furthermore, the course aims to study production systems using simulations and statistical analysis. The student will become familiar with examples of production systems in our country and the European Union. Emphasis is placed on the productivity and adaptability of production systems to changing production conditions (climatic, legislative, etc.).</p> <p>Upon successful completion of the course the student will be able to:</p> <ul style="list-style-type: none"> <li>• understand the meaning of production systems</li> <li>• understand the individual functional units of production systems (subsystems)</li> <li>• understand the effects of production systems on the environment and the relationship between complex production systems and the sustainability phenomenon. For example, they will be able to analyze the relationship between the increase in milk production and the "greenhouse" effect, animal welfare, the economic efficiency of the units and its effects on the local / national economy.</li> <li>• analyze and calculate cost data</li> <li>• analyze the impact of innovation (on nutrition and breeding)</li> <li>• work individually and in collaboration with fellow students in addressing abovementioned problems in case studies</li> </ul>

### General Competences

- The ten (10) case studies assignments within the course require autonomous and group work.
- Skills related to search, analysis, data synthesis and information are developed using new technologies.
- The student acquires skills related to respect for the natural environment.
- Discussion of students' approaches to the 10 case studies takes place in front of the whole class, resulting in the cultivation of critical and self-critical thinking.

### 3. COURSE CONTENT

Production Systems (PS):

I. Definition, importance for animal production

II. Systems organization, general principles.

III. PS description models

IV. Mathematical models (simulation, optimization, statistics) for the evaluation of PS

V. Biological and economic efficiency of PS

VI. Examples of PS in our country and in the countries of the European Union with emphasis on productivity and their adaptability to changing production conditions.

VII. Production systems and environment

VIII. Sustainable PS.

### 4. TEACHING and LEARNING METHODS - Evaluation

<b>TEACHING METHOD</b>	In class	
<b>USE OF INFORMATICS and COMMUNICATION TECHNOLOGIES</b>	Powepoint presentations, videos, use of the eclass platform	
<b>TEACHING ORGANISATION (Lectures, individual or group assignments, field trips, individual study et.c.)</b>	<b>Activities</b>	<b>Workload per semester</b>
	Lectures	16
	Individual assignments that focus on the application of methodologies and analysis of case studies in smaller groups of students	10
	Team assignment in a case study. Preparation of project management plans	10
	Individual study	14
	<b>Total contact hours and training</b>	<b>50</b>
<b>STUDENTS EVALUATION</b>	<p>The language of evaluation is Greek</p> <p>Students have the opportunity to choose to be graded either:</p> <p>a) through assignments where the grade results from 90% of the individual assignments and by 10% from the group assignment</p> <p>or</p>	

	<p>b) through written examinations with development questions</p> <p>The selection option is available only for students of the 9th semester and not for the undergraduate students who owe the course. Students who owe the course from previous academic years are examined in writing</p>
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## 5. BIBLIOGRAPHY

Livestock production systems, Laca G.A. and M&W Demment, EOLSS, 2013

Animal Production Systems for Pasture-Based Livestock Production. Edited by: Edward B. Rayburn, published by NRAES (2008)

Precision livestock farming applications: Making sense of sensors to support farm management. Edited by: Ilan Halachmi, published by: Wageningen Academic Publishers (2015)

A comparative evaluation of models of lactating ruminant. Sauvart D. Ann. Zootechn. 1996. 45:215-235.