COURSE OUTLINE

1. GENERAL

SCHOOL	APPLIED BIOLOGY AND BIOTECHNOLOGY		
DEPARTMENT	BIOTECHNOLOGY		
STUDY LEVEL	*Undergraduate*		
COURSE CODE	**159**	**SEMESTER**	4th
COURSE TITLE	THE PHYSIOLOGICAL BASES OF FARM ANIMAL GROWTH		

INDEPENDENT TEACHING ACTIVITIES *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*	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	2	1,04
Laboratory exercises	2	1,04
Independent study		0,92
TOTAL		**3,00**

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	Special background
PREREQUISITE COURSES:	No
LANGUAGE OF INSTRUCTION and EXAMINATIONS :	Greek
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes (in English)
COURSE WEBSITE (URL)	https://mediasrv.aua.gr/eclass/courses/EZPY199/

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*

The course "THE PHYSIOLOGICAL BASES OF FARM ANIMAL GROWTH" aims to familiarize students, in theoretical and practical level, with the contemporary physiological aspects applied in mechanisms of productive animal growth.

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

1. Physiological mechanisms of lipogenesis and lipolysis in the adipose tissue of productive animals

2. Quantitative and molecular study of enzymes and hormones implying in the adipose tissue metabolism

3. The factors that influence carcass and meat production in ruminants.

- 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.

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	*Production of new research ideas*
Adapting to new situations	*Project planning and management*
Decision-making	*Respect for differences and multiculturalism*
Working independently	*Respect for the natural environment*
Team work	*Showing social, professional and ethical responsibility and sensitivity to gender issues*
Working in an international environment	*Criticism and self-criticism*
Working in an interdisciplinary environment	*Production of free, creative and inductive thinking*

- Individual and group work
- Producing new research ideas
- Promotion of free, creative and inductive thinking

3. COURSE CONTENT

Body growth: Basics, Estimation of growth. Muscle tissue and adipose tissue, myogenesis, texture, growth and affecting factors on bones, muscle and adipose tissue growth and protein metabolism. Body composition. Affecting factors and methods of estimation on live animals and carcasses. Fattening efficiency, growth rate, feed conversion. Meat quality. Chemical composition, Physical, chemical and organoleptic characteristics. Problems on meat quality. Modifications of growth by exogenous hormones.

4. TEACHING and LEARNING METHODS - EVALUATION

TEACHING METHOD *Face-to-face, Distance learning, etc.*	In classroom, face to face, in laboratory and in the field.
USE OF INFORMATICS and COMMUNICATION TECHNOLOGIES *Use of ICT in teaching, laboratory education, communication with students*	PowerPoint and video presentations. Communication with students via e-mail. Teaching support through access to the e-class platform, to on-line databases etc.
TEACHING ORGANISATION *The manner and methods of teaching are described in detail.* *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.* *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*	

Activity	***Semester workload (hrs)***
Lectures	26
Laboratory exercises	26
Independent study	23
Course total ***(25 hours of student work load per ECTS)***	***75***

STUDENT EVALUATION *Description of the evaluation procedure* *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*	The evaluation on the course's theory consists of: 1. final written examination on the course's theory (100%), consisting of: I. Evaluation of elements of the course's theory II. Short-answer questions

examination of patient, art interpretation, other *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	III. Multiple choice questions 2. Personal written essay and its presentation The evaluation on the course's laboratory practice is determined by the final written examination (100%) consists of: I. Evaluation of elements of the course's laboratory practice II. Short-answer questions III. Multiple choice questions

5. ATTACHED BIBLIOGRAPHY

-Suggested bibliography :

1) Meat Science.

2) Journal of Animal Science (πχ F. N. Owens et al, (1993), Factors that alter the growth and development of ruminants, J. Anim. Sci. 71, 3138-3150)**.**

3) Journal of Animal Physiology and Nutrition (πχ Y. A. Attia et al (2014), Growth performance, carcass quality, biochemical and haematological traits and immune response of growing rabbits as affected by different growth promoters, J. Anim. Phys. and Nutr. 98 (1) 128-139).