

COURSE LAYOUT

1. GENERAL

SCHOOL:	ANIMAL BIOSCIENCES		
TEACHING DEPARTMENT:	ANIMAL SCIENCE (DAS)		
STUDY LEVEL:	BACHELOR		
COURSE CODE:	171	SEMESTER:	8th
DEPARTMENT TO WHICH IS OFFERED:	(DAS)		
COURSE TITLE:	FEED MANUFACTURING TECHNOLOGY		
INDEPENDENT TEACHING ACTIVITIES <i>In case ECTS are awarded for distinct parts of the course e.g. Theory Lectures, Laboratory Practicals etc. If ECTS are awarded uniformly for the entire course, give the weekly teaching hours and total ECTS.</i>		WEEKLY TEACHING HOURS	ECTS
Lectures		2	2
Laboratory practicals		0	0
ΣΥΝΟΛΟ		2	2
COURSE TYPE: <i>Background, Basic knowledge, Field of Science, Skill development</i>	Field of Science, General Knowledge, Skills development		
PREREQUISITES:	Feedstuffs and Feedstuffs Technology		
TEACHING and EVALUATION LANGUAGE:	Greek		
IS THE COURSE OFFERED for ERASMUS STUDENTS?	No		
COURSE WEB PAGE (URL):	https://oeclass.aula.gr/eclass/courses/EZPY206/		
INSTRUCTOR(S):	Papadomichelakis G.		

2. LEARNING OUTCOMES

Learning outcomes

Describe the learning outcomes of the course, the specific knowledge, skills and competences of an appropriate level that students will acquire after successfully completing the course.

Refer to Appendix A.

- Description of the level of learning outcomes for each course of study in line with the European Higher Education Area Qualifications Framework
- Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning
- and Annex B

Learning outcomes Writing Guide

The course is essential to acquire the knowledge necessary in the topic of feedstuffs preparation/processing, as well as the production procedure of composite feedstuffs. Following the lectures, the students will be able to combine data from different topics and successfully manage diet preparation.

In particular, the students will be capable of:

- Understanding the criteria of quantitative and qualitative selection of the appropriate (according to animal species) raw materials (individual feedstuffs).
- Selecting the appropriate raw material process prior to the final diet preparation.
- Understanding the operation and use of all the required equipment (machinery) in feed industries.
- Understanding the structure and management of a feed industry, as well as the aspects of the quality control in the products.
- Conducting proper interventions in several operation parameters, so as to maximize feed production and improve product quality.

General Competences

Considering the general competencies that the graduate (as reported in the Diploma Supplement and listed below) must have acquired, describe in which one(s) the course is intended.

Search, analyze and synthesize data and information, using the necessary technologies
Adapt to new situations
Decision making
Autonomous work
Teamwork
Work in an international environment
Work in an interdisciplinary environment
Production of new research ideas

Project design and management
Respect for diversity and multiculturalism
Respect for the natural environment
Demonstration of social, professional and moral responsibility and sensitivity to gender issues
Exercise of criticism and self-criticism
Promotion of free, creative and inductive thinking

- Decision making
- Individual and group work
- Combination of several scientific topics
- Work planning and management
- Respect to the natural environment

3. COURSE CONTENT

- Raw material selection according to the digestive physiology of each farm animal species, the age of the animals, the quality and the cost of the individual feedstuffs.
- Preparation/processing of the individual feedstuffs (washing, cutting, grinding, weighing, mixing etc.).
- Factors affecting the successful preparation of the feedstuffs (cutting and grinding size, feed particle size, grinding time, weighing precision, mixing time, pelleting parameters etc.).
- Buildings and equipment in feed industries (storage, silos, weighing scales, hammer mills, batch and continuous mixers, pellet presses etc.). Performance parameters.
- Buildings and equipment in feed industries (extruders, cooling systems, crumblers, sieving systems, liquid addition systems, transfer lines etc.). Performance parameters.
- Management and operation of feed industries.
- Product categories (physical properties etc.).
- Quality control of products (with respect to physical properties, chemical composition, antinutritional factors, microbiological control etc.).

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHOD <i>Face to face in classroom, Distance Learning, etc.</i>	In class (lectures) and in field (feed manufacturing unit, AUA)	
USE OF INFORMATICS and COMMUNICATION TECHNOLOGIES <i>Use of ICT in Teaching, Laboratory Practicals, Communication with Students etc.</i>	PowerPoint and video presentations for lectures. Communication with students via e-mail. Teaching support through access to the e-class platform, to on-line databases etc.	
TEACHING ORGANIZATION <i>Describe in detail the methods of teaching: Lectures, Seminars, Laboratory Practicals, Field Exercise, Study and Analysis of Bibliography, Tutorial, Practice (Placement), Clinical Exercise, Art Workshop, Interactive Teaching, Educational Visits, Project Work, Authoring, Artistic creation etc.</i> <i>The student's study hours for each learning activity and hours of non-guided study are indicated so that the total workload at the semester corresponds to the ECTS</i>	Activity	Work-load (h) per semester
	Lectures	26
	Writing and presenting an assignment in the classroom, as a member of a small team (2-3 persons)	8
	Individual study	16
	Total work load (25 h work load per ECTS)	50
STUDENTS' EVALUATION <i>Description of the evaluation process</i>	I. Theoretical section	

<p><i>Assessment Language, Assessment Methods, Formulation or Conclusion, Multiple Choice Test, Short Response Questions, Test Questions, Problem Solving, Written Work, Reporting, Oral Examination, Public Presentation, Laboratory Work, Clinical Patient Examination, Artistic Interpretation, Other</i></p> <p><i>Identify certain evaluation criteria and state if and where they are accessible by the students.</i></p>	<p>(a) Optional attendance of lectures by students (assignments, etc.).</p> <p>(b) Group essay (20%)</p> <p>(c) Final written examination (80%) with questions to develop a topic.</p> <p>(d) Marking Scale: 0-10, Minimum Passing Mark: 5.</p> <p>II. Laboratory department</p> <p>-</p> <p>III. The evaluation language is Greek.</p> <p>IV. The evaluation criteria are communicated to the students.</p>
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5. BIBLIOGRAPHY

Proposed literature:

(A) Relevant literature - books:

1. McElhiney, R.R. Feed manufacturing technology IV. American Feed Industry Association, 1994. Βιβλιοθήκη Γεωπονικού Πανεπιστημίου Αθηνών.
2. Papadopoulos G. Feedstuffs Technology. AUA Library.
3. Kalaisakis P. Feedstuffs and Feedstuffs Technology. AUA Library.

(B) Digital training material (e-class):

1. Papadomichelakis G. 2019. Lectures (pdf) on feed manufacturing technology

(Γ) Proposed books (in EUDOXUS):

1. Fegeros K.I. Feedstuffs and feed additives, Athens 2017, UniBooks Editions (Eudoxus code: 68407501).