

DISCIPLINE DESCRIPTION

1. Program data

1.1 Higher education institution	UNIVERSITY OF ORADEA
1.2 Faculty	Environment protection
1.3 Department	Animal science and Agroturism
1.4 Field of study	Animal Science
1.5 Study cycle	BACHELOR
1.6 Study Program / Qualification	Animal science/ engineer

2. Discipline data

2.1 Name of the discipline	Technology for the production of compound feeds						
2.2 Course holder	Prof. dr. Mierlita Daniel						
2.3 Seminar / laboratory / project owner	Prof. dr. Mierlita Daniel						
2.4 Year of study	III	2.5 Semester	VI	2.6 Type of evaluation	E	2.7 The discipline regime	I

3. Estimated total time (hours per semester of didactic activities)

3.1 Number of hours per week	4	of which: 3.2 course	2	3.3 seminar/laboratory/project	2
3.4 Total hours of the curriculum	56	of which: 3.5 course	28	3.6 seminar / laboratory / project	28
Distribution of Time Fund					ore
Study after manual, course support, bibliography and notes					18
Additional documentation in the library, on the specialized electronic platforms and on the field					10
Training seminars / laboratories, themes, papers, portfolios and essays					20
Tutorial					4
Examinations					4
Other activities.....					
3.7 Total hours of individual study		56			
3.9 Total hours per semester		112			
3.10 Number of credits		3			

4. Preconditions (where applicable)

4.1 curriculum	
4.2 skills	

5. Conditions (where applicable)

5.1. of course	The lecture room with laptop and videoprojector.
5.2. seminar / laboratory / project	Laboratory room equipped with the equipment necessary to determine the nutrient content and appreciation of the feed quality; computers, Internet connection, specialized software.

6. Specific skills accumulated

Professional skills	<p>C2: Elaboration of technical projects for the establishment / modernization of livestock breeding, fish farming and aquaculture and for accessing financial resources.</p> <p>C3: Selection, amelioration, production and exploitation of biological reproductive material.</p> <p>C5: Implementation of Community Agricultural Policy at national level in the field of animal production.</p> <p>C6: Provide consultancy and extension services in the field of animal husbandry.</p>
Transversal skills	<p>CT3</p> <p>Objective self-evaluation of the need for continuous professional training in order to adapt and respond to the economic requirements; the use of information and communication techniques and at least one international language.</p>

7. Objectives of the discipline

7.1 The general objective of the discipline	<ul style="list-style-type: none"> - To communicate to students the concepts, concepts and experimental data on the raw and auxiliary materials used in the manufacturing process, their receipt and storage under appropriate conditions, - Knowing the stages of the technological flow of the production of mixed fodder, - Knowing the methods used in the quality control of raw materials and finished products.
7.2 Specific objectives	<ul style="list-style-type: none"> <input type="checkbox"/> Elaboration of recipes for the production of compound feed for all farm animal species <input type="checkbox"/> Optimization of the technological flow specific to the combined feed factories; <input type="checkbox"/> Coordination of laboratory activities specific to the control of mixed fodder quality.

8. Contents *

8.1 Cours	teaching methods	Nr. Hours / Observations
Need to use combined fodder and their economic efficiency. Classification of combined fodder.	Lecture, explanation, conversation and dialogue with students heuristics	2
Raw and auxiliary materials used in the combined feed industry. <ul style="list-style-type: none"> - Energy resources. - Protein raw materials. - Synthetic amino acids. - Mineral Nutrition - Vitamins. - Feed additives 	Lecture, explanation, conversation and dialogue with students heuristics	6
Receipt of raw materials and technical appreciation of their quality.	Lecture, explanation, conversation and	2

	dialogue with students heuristics	
Handling and storage of raw materials.	Lecture, explanation, conversation and dialogue with students heuristics	2
Conditioning and processing of raw materials for incorporation in the compound feed structure.	Lecture, explanation, conversation and dialogue with students heuristics	2
Elaboration of the recipes for the production of mixed fodder. Use of information systems in developing manufacturing prescriptions. Biological testing of prescriptions and their approval.	Lecture, explanation, conversation and dialogue with students heuristics	2
The technology of manufacturing complete fodder. Grinding. Dosage. Homogenization. Integration of liquids in compound feed. Granulation. The technology of manufacturing milk constituents.	Lecture, explanation, conversation and dialogue with students heuristics	6
Technology for the production of compound feed. P.V.M. (Protein, vitamins and minerals). Vitamin-mineral premixes. Premixes for intervention.	Lecture, explanation, conversation and dialogue with students heuristics	2
Feed quality control. General feed quality control methodology. The technique of analyzing samples. Organoleptic, physical and botanical control of fodder. Chemical control of feed quality. Determination of content in substances other than those specified in the Wendee scheme. Controlling Freshness of Fodder. Control of the presence of toxic substances in fodder or inhibitors. Controlling the homogeneity of combined feeds. Mycological and mycotoxicological control of fodder. Bacteriological control of fodder.	Lecture, explanation, conversation and dialogue with students heuristics	3
Packaging, storage and dispatching of compound feed.	Lecture, explanation, conversation and dialogue with students heuristics	1
References DRINCENU D. (1994) - Alimentația animalelor domestice. Ed. Euroart, Timișoara. HALGA P. și col. (2002) –Alimentație animală. Ed. Pim, IAȘI. MIERLITA D. (2008) – Nutritia si alimentatia animalelor-Curs universitar. Ed. Universitatii din Oradea. POP I.M. (2002) – Aditivi furajeri. Ed. Pim, IAȘI.		

<p>POND W. G.; D.C. CHURCH; K. R. POND (1995) – Basic animal nutrition and feeding. Fourth Edition – Wiley; New York.</p> <p>SĂLAJAN GH. (1984) – Prepararea nutrețurilor și controlul calității lor. Ed. Ceres, București.</p> <p>STOICA I. (2001) – Nutriția și alimentația animalelor. Ed. Coral Sanivet, București.</p> <p>ȘARA A.; D. MIERLIȚĂ (2003) – Nutriția și alimentația animalelor de fermă. Ed. AcademicPres, Cluj-Napoca.</p> <p>ȘTEF LAVINIA (2008) – Nutrețurile combinate in alimentatia suinelor si a pasarilor. Ed. Mirton, Timisoara.</p>		
8.2 Seminar	teaching methods	Nr. Hours / Observations
8.3 Laboratory		
Stages of the technological stream of manufacturing of compound feed.	lecture, explanation, dialogue with students, individual and team activities.	2
Machinery, plant and equipment used in the combined fodder industry.	lecture, explanation, dialogue with students, individual and team activities.	2
Optimizing recipes for the manufacture of compound feed for: pigs, poultry, cattle, sheep, rabbits and fish.	lecture, explanation, dialogue with students, individual and team activities.	4
Production of complete and complementary fodder.	lecture, explanation, dialogue with students, individual and team activities.	4
Preparation of unique feed mixtures.	lecture, explanation, dialogue with students, individual and team activities.	2
Prepare complete compound feed directly into the animal farm.		2
Preparation of mixtures for ruminants based on PVM concentrates with non-protein nitrogen added.		2
<p>Feed quality control.</p> <p>General feed quality control methodology.</p> <p>The technique of analyzing samples.</p> <p>Organoleptic, physical and botanical control of fodder.</p> <p>Controlling the homogeneity of combined feeds.</p> <p>Chemical control of feed quality.</p> <p>Determination of content in substances other than those specified in the Wendee scheme.</p> <p>Controlling Freshness of Fodder.</p> <p>Control of the presence of toxic substances in fodder or inhibitors.</p> <p>Mycological and mycotoxicological control of fodder.</p> <p>Bacteriological control of fodder.</p>		10
8.4 Project		

References:
HALGA P. și col. (2002) –Alimentație animală. Ed. Pim, IAȘI.
MIERLITA D. (2008) – Nutritia si alimentatia animalelor-Curs universitar. Ed. Universitatii din Oradea.
POPA O.; GH. SĂLĂJAN; A. ȘARA (1991) – Nutrețurile și nutriția rațională a animalelor de fermă. Ed. Ceres, București.
SĂLĂJAN GH. (1984) – Prepararea nutrețurilor și controlul calității lor. Ed. Ceres, București.
ȘARA A.; D. MIERLIȚĂ (2003) – Nutriția și alimentația animalelor de fermă. Ed. AcademicPres, Cluj-Napoca.
ȘTEF LAVINIA (2008) – Nutrețurile combinate in alimentatia suinelor si a pasarilor. Ed. Mirton, Timisoara.

9. Corroborating the contents of the discipline with the expectations of epistemic community representatives, professional associations and representative employers in the field of the program

The thematic content of the subject matter of Combined Fodder Technology is in line with that of other university centers in the country and abroad. It is developed in collaboration with the representative employers in the field of animal husbandry (zootechnical farms, combined feed factories), where the students practice, thus facilitating the graduation of the students.

10. evaluation

Tip activitate	10.1 Evaluation criterias	10.2 Metode de evaluare	10.3 Weight of the final grade
10.4 Cours	correctness and completeness of knowledge; - logical coherence; - degree of assimilation of specialized terms - interest in individual study.	continuous evaluation (student's free exposure, oral conversation and questioning, active student participation in courses) summative assessment (final written assessment during the exam session)	20% 40%
10.5 Seminar			
10.6 Laboratory	- the ability to work with assimilated knowledge; - the capacity to operate with the data and the results obtained in the laboratory; - interest in individual study.	continuous assessment (current written papers, individual papers, active participation of the student in laboratory activities) Summative assessment (final written assessment during the exam session).	25% 15%
10.7 Project			
10.8 Minimum performance standard: Very good knowledge of one subject out of two; the score given for the periodical checks during the semester should be at least 5; marking "very good" at least ½ of the papers (homeworks) handed over during the year; attending at least 80% of the teaching activities.			

--

Date of completion

01. 10. 2022

Signature of course holder

Prof. dr. ing. Mierlita D.
(dadi.mierlita@yahoo.com)

Signature of holder
seminar/laboratory/project
Prof. dr. ing. Mierlita D.

Date of approval in the department

.....

Signature of Department Director
Lecturer dr. ing. Monica Dodu

Sign Decan
Conf. Dr. Ing. Cristina Maerescu