

<b>Universitatea din Oradea</b>	<b>PROCEDURA pentru inițierea, aprobarea, monitorizarea și evaluarea periodică a programelor de studii</b>	<b>COD: SEAQ PE – U. 01</b>						
			<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
							<b>Aprobat în ședința de Senat din data: -- 17.09.2012</b>	

## Anexa 6

### DISCIPLINE DESCRIPTION

#### 1. Program data

1.1 Higher education institution	<b>UNIVERSITY OF ORADEA</b>
1.2 Faculty	<b>Environment protection</b>
1.3 Department	<b>Agriculture-Horticulture</b>
1.4 Field of study	<b>Agronomy</b>
1.5 Study cycle	<b>Master</b>
1.6 Study Program / Qualification	<b>Modern technologies in agricultural and zootechnical farms</b>

#### 2. Discipline data

2.1 Name of the discipline	Nutrition, feeding and combined fodder						
2.2 Course holder	Prof. dr. Mierlita Daniel						
2.3 Seminar / laboratory / project owner	Prof. dr. Mierlita Daniel						
2.4 Year of study	II	2.5 Semester	III	2.6 Type of evaluation	E	2.7 The discipline regime	I

(I) Impusă; (O) Opțională; (F) Facultativă

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

3.1 Number of hours per week	3	of which: 3.2 course	2	3.3 seminar/laboratory/project	1	
3.4 Total hours of the curriculum	42	of which: 3.5 course	28	3.6 seminar / laboratory / project	14	
<b>Distribution of Time Fund</b>						
Study after manual, course support, bibliography and notes						10
Additional documentation in the library, on the specialized electronic platforms and on the field						10
Training seminars / laboratories, themes, papers, portfolios and essays						14
Tutorial						4
Examinations						4
Other activities.....						
<b>3.7 Total hours of individual study</b>	<b>42</b>					
<b>3.9 Total hours per semester</b>	<b>84</b>					
<b>3.10 Number of credits</b>	<b>5</b>					

#### 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 /	Laboratory room equipped with the equipment necessary to determine the

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project	nutrient content and appreciation of the feed quality; computers, Internet connection, specialized software.
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6. Specific skills accumulated	
Professional skills	<p>C1 Elaboration of sustainable agricultural production technologies, organization and coordination of the production processes.</p> <p>C2 Elaborating strategies for the implementation of Community Agricultural Policies at national level.</p> <p>C6 Providing consultancy and extension services in agriculture.</p>
Transversal skills	<p>CT2 Applying effective communication techniques in team-specific activities; assume a role within the team and observe the principles of division of labor.</p>

### 7. Objectives of the discipline

7.1 The general objective of the discipline	<ul style="list-style-type: none"> <li>- To communicate to students the concepts, notions and experimental data on the specifics of nutrition and animal nutrition and the optimization of fodder ratios and combined feed formulations.</li> <li>- Knowing the stages of the technological flow of the production of mixed fodder,</li> <li>- Knowing the methods used in the quality control of feed materials and mixed fodder.</li> </ul>
7.2 Specific objectives	<ul style="list-style-type: none"> <li><input type="checkbox"/> Establishing nutritional value of feed;</li> <li><input type="checkbox"/> Establish nutritional requirements of animals;</li> <li><input type="checkbox"/> Optimization of fodder ratios in relation to the species, age, form and level of production;</li> <li><input type="checkbox"/> Elaboration of recipes for the production of compound feed for all farm animal species;</li> <li><input type="checkbox"/> Optimization of the technological flow specific to the combined feed factories;</li> <li><input type="checkbox"/> Coordination of laboratory activities specific to the control of mixed fodder quality.</li> </ul>

### 8. Contents \*

8.1 Cours	teaching methods	Nr. Hours /
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		Observations
Assessment of feed value.	Lecture, explanation, conversation and dialogue with students heuristics	2
Feed- Nutrition characteristics and way of use in animal feed.	Lecture, explanation, conversation and dialogue with students heuristics	2
Modern techniques for preserving and storing fodder.	Lecture, explanation, conversation and dialogue with students heuristics	2
Standard feeding of domestic animals. Influence of nutrition on quantitative and qualitative production in animals. Establishing nutrient requirements for vital functions and for different forms of production	Lecture, explanation, conversation and dialogue with students heuristics	2
Specificity of ruminant feeding.	Lecture, explanation, conversation and dialogue with students heuristics	4
The specificity of feeding monogastric animals.	Lecture, explanation, conversation and dialogue with students heuristics	2
Species of fish nutrition.	Lecture, explanation, conversation and dialogue with students heuristics	2
Need to use combined fodder and their economic efficiency. Classification of combined fodder.	Lecture, explanation, conversation and dialogue with students heuristics	1
Raw and auxiliary materials used in the combined feed industry. - Energy resources. - Protein raw materials. - Synthetic amino acids. - Mineral Nutrition - Vitamins. - Feed additives	Lecture, explanation, conversation and dialogue with students heuristics	3
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.	Lecture, explanation,	4

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Grinding. Dosage. Homogenization. Integration of liquids in compound feed. Granulation. The technology of manufacturing milk constituents.	conversation and dialogue with students heuristics	
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
References DRINCENU D. (1994) - Alimentația animalelor domestice. Ed. Euroart, Timișoara. HALGA P. și col. (2000) – Nutriție animală. Ed. Dosoftei, IAȘI. HALGA P. și col. (2002) –Alimentație animală. Ed. Pim, IAȘI. MCDONALD; R.A. EDWARDS; JFD GREENHALGH; C.A. MORGAN (2002) – Animal nutrition. Pearson, Prentice Hall. MARCU N.; D. MIERLIȚĂ (2006) – Zootehnie generală și alimentație. Ed. Digital Data; Cluj-Napoca. MIERLITA D. (2008) – Nutritia si alimentatia animalelor-Curs universitar. Ed. Universitatii din Oradea. MIERLITA D. (2008) – Nutritia animalelor domestice. Ed. AcademicPres, Cluj-Napoca. POP I.M. (2002) – Aditivi furajeri. Ed. Pim, IAȘI. POND W. G.; D.C. CHURCH; K. R. POND (1995) – Basic animal nutrition and feeding. Fourth Edition – Wiley; New York. 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. STOICA I. (2001) – Nutriția și alimentația animalelor. Ed. Coral Sanivet, 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.		
8.2 Seminar	teaching methods	Nr. Hours / Observations
8.3 Laboratory		
Calculating the nutritional value expressed in different units of measurement. - calculation of digestibility coefficients; - calculation of TSD in digestibility experiments with one and two control periods; - calculation of the net starch equivalent; - calculation of oat nutrition unit (UN); milk nutrition units (UNL); meat nutrition unit (UNC), digestible protein (Pd), digestible protein in the intestine (PDI).	lecture, explanation, dialogue with students, individual and team activities.	2

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- calculation of total digestible, metabolisable and net energy.		
The technique of feeding the food rations and the basic conditions that they must meet.	lecture, explanation, dialogue with students, individual and team activities.	<b>1</b>
Stages of the technological stream of manufacturing of compound feed.	lecture, explanation, dialogue with students, individual and team activities.	<b>1</b>
Machinery, plant and equipment used in the combined fodder industry.	lecture, explanation, dialogue with students, individual and team activities.	<b>1</b>
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.	<b>2</b>
Preparation of unique feed mixtures.	lecture, explanation, dialogue with students, individual and team activities.	<b>1</b>
Prepare complete compound feed directly into the animal farm.	lecture, explanation, dialogue with students, individual and team activities.	<b>1</b>
Feed quality control. General feed quality control methodology. The technique of analyzing samples. Organoleptic, physical and botanical control of fodder. Controlling the homogeneity of combined feeds. 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. Mycological and mycotoxicological control of fodder. Bacteriological control of fodder.	lecture, explanation, dialogue with students, individual and team activities.	<b>5</b>
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.		

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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 în alimentația suinelor și a pasărilor. 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**

Thematic content of the Department of Nutrition, Feeding and Combined Feed has been developed in collaboration with representative employers in the field of animal husbandry (zootechnical farms, combined feed factories), where students practice, thus facilitating the graduates' professional placement.

**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.			

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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

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Signature of Department Director

Ass. Prof. dr. Ioana Borza

Sign Decan

Conf. Dr. Ing. Cristina Maerescu