

## DISCIPLINE SHEET

### 1. Data about program

1.1 Academic institution	1.1 Institution of higher education	<b>UNIVERSITY OF ORADEA</b>
1.2 Faculty	1.2 Faculty	<b>FACULTY OF ENVIRONMENTAL PROTECTION</b>
1.3 Department	1.3 Department	<b>FOOD ENGINEERING</b>
1.4 Field of study	1.4 Field of study	<b>FOOD ENGINEERING</b>
1.5 Cycle of study	1.5 Cycle studies	<b>BACHELOR</b>
1.6 Study programme/Qualification	1.6 Curriculum/Qualifications	<b>CEPA/ ENGINEER</b>

### 2. Data about the disciplines

2.1 Name of discipline		<b>Food technology of animal origin II</b>					
2.2 Course holder		Ș.L. dr.ing. HÎLMA ELENA					
2.3 Laboratory holder		Ș.L. dr.ing. HÎLMA ELENA					
2.4 Year of study	IV	2.5 Semester	VII	2.6 Type of evaluation	Ex	2.7 Regime of discipline	Ob

Ob – Compulsory; As – associated; Op – Optional.

#### Total estimate time (hours per semester of didactic activities)

3.1 Number of hours per week	4	from which:2 course	2	3.3 laboratory	2
3.4 Total hours in the curriculum	56	din care: 28 course	28	3.6 laboratory	28
Time allotment					hours
Study assisted by manual, course support, bibliography and notes					7
Additional documentation in the library/ on specialised electronic platforms and in the field					7
Preparation of seminars/laboratories/ topics/reports, portfolios and essays					10
Tutorship					10
Examinations					5
Additional documentation in the library/ on specialised electronic platforms and in the field					5
<b>3.7 Total hours of individual study</b>	<b>44</b>				
<b>3.9 Total hours per semester</b>	<b>100</b>				
<b>3.10 Number of credits</b>	<b>4</b>				

### 4. Precondiții (acolo unde este cazul)

<b>4.1 curriculum</b>	Biochemistry, Organic Chemistry, Microbiology
<b>4.2 competences</b>	Knowledge of milk components, microbiological and biochemical transformations of food

### 5. Prerequisites (where appropriate)

<b>5.1. related to course</b>	<ul style="list-style-type: none"> <li>Students will not be present at lectures, seminars/laboratories with mobile phones. It also will not be tolerated during phone calls, nor leaving by the students of the course with a view to taking over personal telephone calls.</li> </ul>
<b>5.2. related to seminar/laboratory/project</b>	<ul style="list-style-type: none"> <li>The term teaching seminar work shall be established by agreement with the holder of the students. Will not be accepting applications for deferment thereof on grounds other than objective grounds.</li> </ul>

<b>6. Specific competences acquired</b>	
<b>Professional competences</b>	<ul style="list-style-type: none"> <li>• C2 Application of the general principles of technological design in the field of food production</li> <li>• C3 Operation of process monitoring and automation systems in the food industry and food quality control and expertise laboratories</li> <li>• C4 Realization food quality control</li> <li>• C5 Realization food expertise</li> </ul>

**7. Objectives of discipline (coming from the specific competences acquired)**

<b>7.1 General objective</b>	<ul style="list-style-type: none"> <li>• Knowledge of raw materials by students</li> <li>• Control over technological flow and finished product</li> <li>• The influence of milk processing on the quality of dairy products</li> <li>• Quality of finished products, quality certification.</li> </ul>
<b>7.2 Specific objectives</b>	<p style="text-align: center;">Accumulation of knowledge to</p> <ul style="list-style-type: none"> <li>• processing in optimal conditions of milk;</li> <li>• obtaining dairy products of constant quality</li> <li>• dairy products with important nutritional and biological value for consumers,</li> <li>• maintaining the quality of the products and their nutritional and biological value during storage and marketing.</li> </ul>

**8. Content \***

<b>8.1 Course</b>	<b>Methods of teaching</b>	<b>No. of hours/Remarks</b>
1. Milk raw material, physico-chemical properties and chemical composition	Interactive lecture with video projector	2
2 Milk raw material, microbiological composition, milk of other animal species	Interactive lecture with video projector	2
3 Drinking milk, the technological process	Interactive lecture with video projector	2
4 Control on technological flow and finished product drinking milk	Interactive lecture with video projector	2
5 Technological flow control and finished consumer cream product	Interactive lecture with video projector	2
6 Control over technological flow and finished product fermented dairy products: the technological process	Interactive lecture with video projector	2
7 Control on technological flow and finished product of canned milk: concentrated milk	Interactive lecture with video projector	2
8 Technological flow control and finished product canned milk: milk powder	Interactive lecture with video projector	2
9 Ice cream: classification, control over technological flow and finished product	Interactive lecture with video projector	2
10 Cheeses: classification, control over technological flow and finished product fresh cheeses	Interactive lecture with video projector	2
11 Technological flow control and finished product soft pasta cheeses, brine cheeses	Interactive lecture with video projector	2
12 Control on technological flow and finished product cheeses with semi-hard and hard fermented pasta	Interactive lecture with video projector	2
13 Technological flow control and finished product cheeses with scalded pasta (spun paste cheeses)	Interactive lecture with video projector	2
14 Cheeses with melted paste, characteristics of cheeses	Interactive lecture with video projector	2

<b>8.2. Laboratory</b>		
1. Specific rules for the protection of labour.	Demonstration, analysis, and exposure	2
2. Physico-chemical analyzes milk raw material	Demonstration, analysis, and exposure	2
3. Determination of milk falsifications	Demonstration, analysis, and exposure	2
4. Detection of milk inhibitors	Demonstration, analysis, and exposure	2
5. Microbiological analysis of raw milk	Demonstration, analysis, and exposure	2
6. Drinking milk analysis	Demonstration, analysis, and exposure	2
7. Sour cream analysis	Demonstration, analysis, and exposure	2
8. Analysis of acidic dairy products	Demonstration, analysis, and exposure	2
9. Butter analysis	Demonstration, analysis, and exposure	2
10. Concentrated milk analysis	Demonstration, analysis, and exposure	2
11. Milk powder analysis	Demonstration, analysis, and exposure	2
12. Ice cream analysis	Demonstration, analysis, and exposure	2
13 Fresh cheeses analysis	Demonstration, analysis, and exposure	2
14 Matured cheese analyzes	Demonstration, analysis, and exposure	2
<b>Bibliography</b>		
1. Borda D. 2007. Tehnologii în industria laptelui-Aplicații ale presiunii înalte, Editura Academica Galați		
2. Chintescu G., Grigore Șt. 1982. Îndrumător pentru tehnologia produselor lactate. pag.33-40,59-76,181-207. Editura tehnică București		
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7. Costin G.M., 1985. Principii și procedee moderne în industria brânzeturilor. pag. 9-163, Universitatea Galați		
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**9. Corroboration of discipline content with the expectations of the epistemic community, professional associations and representative employers from the field corresponding to the study programme**

The study provides specialists for milk processing units, for distributors of equipment and additives in the dairy industry

**10. Evaluation**

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share in the final grade
<b>10.4 Course</b>	for note 5– knowledge of material 50% for note 10 – knowledge of material 100%	Summative assessment- sample exam-written or oral	80%
<b>10.5 Seminar</b>	-	-	-
<b>10.6 Laboratory</b>	Test with 5 questions at the end of the laboratory works	Continuous evaluation in the laboratory; knowledge verification laboratory	10% 10%
<b>10.7 Project</b>	-	-	-
<b>10.8 Minimum standard of performance</b>			
<ul style="list-style-type: none"> <li>• Elaboration of a project or process specific food industry equipment, using concepts, theories and methods in the field</li> <li>• The development of a technological project</li> <li>• Preparation of a technical study by the efficient use of resources and sources of relevant and current documentation (including internet, databases, online courses).</li> </ul>			

Date of completion  
1.10.2020

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