DISCIPLINE SHEET

1. Data about program

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

2. Data about the disciplines

2.1 Name of discipl	2.1 Name of discipline Food technology of animal origin MILK AND DA			MILK AND DAIRY			
PR			PRO.	PRODUCTS II			
2.2 Course holder			Lecturer HÎLMA ELENA				
2.3 Laboratory holder			Lectu	Lecturer HÎLMA ELENA			
2.4 Year of study	IV	2.5 Semester	VII 2.6 Type of Ex 2.7 Regime of		Ob		
				evaluation		discipline	

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		3.3 laboratory	2
3.4 Total hours in the curriculum 56		din care: 28 course	28	3.6 laboratory	28
Time allotment					hou
					rs
Study assisted by manual, course support, bibliography and notes					5
Additional documentation in the library/ on specialised electronic platforms and in the field					7
Preparation of seminars/laboratories/ topics/reports, portfolios and essays				7	
Tutorship					7

Tutorship

Examinations Additional documentation in the library/ on specialised electronic platforms and in the field 3.7 Total hours of individual 40

5

9

study	
3.9 Total hours per semester	96
3.10 Number of credits	4

4. Precondiții (acolo unde este cazul)

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

5. Prerequisites (where appropriate)

5.1. related to course	• 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.
5.2. related to seminar/laboratory/ project	• 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.

6. Spec	ific con	npetences acquired
	•	C2 Application of the general principles of technological design in the field of food production
nal	•	C3 Operation of process monitoring and automation systems in the food industry
sio ten		and food quality control and expertise laboratories
fes	•	C4 Realization food quality control
ro om	•	C5 Realization food expertise
H c		

7.1 General objective	 Knowledge of raw materials by students Control over technological flow and finished product The influence of milk processing on the quality of dairy products Quality of finished products, quality certification.
7.2 Specific objectives	 Accumulation of knowledge to processing in optimal conditions of milk; obtaining dairy products of constant quality dairy products with important nutritional and biological value for consumers, maintaining the quality of the products and their nutritional and biological value during storage and marketing.

8. Content *

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

8.2. Laboratory		
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
Riblingranhy		

1. Borda D. 2007. Tehnologii în industria laptelui-Aplicații ale presiunii înalte, Editura Academica Galați 2. Chintescu G., Grigore St. 1982. Îndrumător pentru tehnologia produselor lactate. pag.33-40,59-76,181-207. Editura tehnică București

3. Chintescu G. Îndrumător pentru tehnologia brânzeturilor. pag.10-13. Editura tehnică București.

4. Costin, G. M., Bahrim, G., Borda, D., Curic, M., Florea, T., Hansen, K. F., Popa, C., Rotaru, G., Segal, R.,

Skriver, A., Stanciu, S. 2005. Produse lactate fermentate. pag.1-103, 115-176, 248-450. Ed. Academica, Galați. Costin, G. M., Caşulschi, T., Pop, D. M., Stanciu, S., Paraschiv, D. 2007. Produse lactate funcționale. Ed. 5. Academica, Galați.

Costin, G. M., Florea, T., Popa, C., Rotaru, G., Segal, R., Bahrim, G., Botez, E., Turtoi, M., Stanciu, S., 6. Turtoi, G. 2003. Știința și ingineria brânzeturilor. pag. 29-214, 458-564, Ed. Academica, Galați.

7. Costin G.M., 1985. Principii și procedee moderne în industria brânzeturilor. pag. 9-163, Universitatea Galați 8. Costin G.M., Lungulescu Gr. 1985. Valorificarea subproduselor din industria laptelui. pag.11-22. Editura Tehnică, Bucuresti.

Georgescu Gh. 2005. Cartea producătorului și procesatorului de lapte. pag. 13-140; 254-276; 324-40. Editura 9. Ceres, București.

Guzun V., Gr. Mustată, S. Rubtov, C. Banu, C. Vizireanu. 2001. Industrializarea laptelui. Editura "Tehnica-10. Info" Chisinău.

11. Hîlma Elena, 2012, Control de calitate în tehnologia de prelucrare a laptelui, Editura Universității din Oradea. 12. Moraru C., Giurcă V., Segal B., Banu C., Costin G. M., Motoc D., Pană N. Biochimia Produselor

Alimentare, Editura Tehnică București.

Rotaru G. 2003. Sisteme de asigurare a calității, în Știința și ingineria fabricării brânzeturilor. Editura 13. Academica, Galați

14. Rotaru G., Moraru C. 1997. Industrua alimentară. H.A.C.C.P. Calitate. Analiza riscurilor. Punctele critice de control. Ed. Academica, Galați.

15. Scorțescu, G., Chintescu G., Buhățel R. 1967. Tehnologia Laptelui și a Produselor Lactate. Editura Tehnică București.

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	10.3 Share in the final		
		methods	grade		
10.4 Course	for note 5- knowledge of material 50% for note 10 - knowledge of material 100%	Summative assessment- sample exam-written or oral	80%		
10.5 Seminar	-	-	-		
10.6	Test with 5 questions at the end of	Continuous evaluation in	10%		
Laboratory	the laboratory works	the laboratory; knowledge verification laboratory	10%		
10.7 Project	10.7 Project				
10.8 Minimum st	andard of performance				
• Elaboration of a project or process specific food industry equipment, using concepts, theories and methods in the field					
The development of a technological project					
• Preparation of a technical study by the efficient use of resources and sources of relevant and current documentation (including internet, databases, online courses.					

Date of completion 1.10.2020

Signature of course holder Lecturer Hîlma Elena E-mail: hilma_elena@yahoo.com Signature of laboratory holder Lecturer Hîlma Elena E-mail: hilma elena@yahoo.com

Date of approval in the department

Signature of the Head of Department Assoc. Prof. PHD. Eng. Timar Adrian <u>atimar@uoradea.ro</u>

Dean signature Assoc. Prof. PHD. Eng. Maerescu Cristina Maria