UNIVERSITATEA DE ŞTIINŢE AGRICOLE ŞI MEDICINĂ VETERINARĂ CLUJ-NAPOCA
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No._____of _____ **USAMV form CN-0703030116**

SUBJECT OUTLINE

1. Information on the programme

1.1. Higher education institution	University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca
1.2. Faculty	Faculty of Food Science and Technology
1.3. Department	Food Engineering
1.4. Field of study	Food Engineering
1.5.Education level	Bachelor
1.6.Specialization/ Study programme	Food Engineering (IPA)
1.7. Form of education	Full time

2. Information on the discipline

2.1. Name of the discipline	Specialty practice							
2.2. Course coordinator								
2.3. Seminar/ laboratory/ project coordinator	Borșa Andrei, PhD, Assist.							
2.4. Year of study	II	2.5. Semester	**VI**	2.6. Type of evaluation	continuous	2.7. Discipline status	Content[2]	DS
							Compulsoriness[3]	DI

3. Total estimated time (teaching hours per semester)

3.1. Hours per week – full time programme	6.43	out of which: 3.2. lecture	-	3.3. seminar/ laboratory/ project	6.43
3.4.Total number of hours in the curriculum	90	Out of which: 3.5.lecture	-	3.6.seminar/laboratory	90
Distribution of the time allotted					hours
3.4.1. Study based on book, textbook, bibliography and notes					0
3.4.2. Additional documentation in the library, specialized electronic platforms and field					0
3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays					0
3.4.4.Tutorials					0
3.4.5.Examinations					0
3.4.6. Other activities					0
3.7. Total hours of individual study	0				
3.8. Total hours per semester	90				
3.9. Number of credits[4]	2				

4. Prerequisites (is applicable)

4.1. curriculum-related	Operations and machinery in the food industry, raw vegetable and animal materials
4.2. skills-related	The student must have general knowledge of food engineering

5. Conditions (if applicable)

5.1. for the lecture	During practical activities, the students will present themselves in the pilot stations or at the economic agents in the scheduled period with the results of the medical analyzes according to the sanitary-veterinary norms in force and will carry out

	activities with the raw and auxiliary materials provided. The use of protective equipment such as a robe and cap is mandatory during practical activities.
5.2. for the seminar/ laboratory/ project	During practical works, each student will develop an individual activity with laboratory materials (made available in the book that describes the laboratory work). Academic discipline is imposed throughout the course of practical works.

6. Specific competences acquired

Professional competences	C3.2. Explain and interpret the principles and methods used in technological processes in the food chain C3.3 Monitor and control technological processes in the food industry, identify abnormal situations and propose solutions
Transversal competences	CT1 Apply strategies of perseverance, rigor, efficiency and responsibility at work, punctuality and taking responsibility for the results of personal activity, creativity, common sense, analytical and critical thinking, problem solving, etc., based on the principles, norms and values of the code of professional ethics in the food field CT2 Apply interrelationship techniques within a team; to amplify and refine their empathic capacities for interpersonal communication and to assume specific attributions in carrying out group activity in order to treat / resolve individual / group conflicts, as well as for optimal time management.

7. Course objectives (based on the list of competences acquired)

7.1. Overall course objective	To ensure the consolidation of the theoretical knowledge and the development of the communication and organization skills of the graduate of the bachelor cycle in accordance with the principles of food technologies, to solve engineering and technological problems and to facilitate their insertion on the labor market.
7.2. Specific objectives	To acquire the knowledge regarding the legislation in force and the instructions for safety and health at work specific to the food practice To understand the role and the way of organization, development and evaluation of the internship and to use efficiently and planned the various ways and techniques of learning To acquire the knowledge regarding the content of the job description, to understand the tasks deriving from it, the necessary key competencies and the division of the compartments in a company according to them. To acquire general knowledge regarding the management of production processes, production quality management and human resources management and interrelationship techniques within the team.

8. Content

8.1.LECTURE **Number of hours –**	Teaching methods -	Notes -

8.2. PRACTICAL WORK **Number of hours –120**	Theoretical presentation of practical works	
Technological practice in a profile unit (practice in individual system) - documentation for the diploma project or in a pilot station (in groups of maximum 5 students)		30 practical works = 60 hours
Unit description: name, address, history, field of activity, production capacity, production profile (assortment structure / product groups), unit structure (productive and non-productive technological spaces, auxiliary spaces), unit compartmentalization	Observation, explanation, conversation, problematization	1/2 laboratory work = 1 hour
Description of the general and detailed technological flow of manufacturing the products in the unit	Observation, explanation,	1/2 laboratory work = 1 hour

	conversation, problematization	
Description of raw materials used in production (name, composition, action, method of use, dosage)	Explanation, conversation, problematization, case study	1/2 laboratory work = 1 hour
Description of operations specific to the technological flow of manufacturing of various product groups.	Observation, explanation, conversation, problematization	1 laboratory work = 2 hours
Accomplishment of technological schemes (by assortment groups) and establishment of technological manufacturing recipes (by assortments)	Explanation, conversation, problematization, case study	1/2 laboratory work = 1 hour
Description of machines used in processing. Comparative analysis with existing technologies: presentation of technological alternatives in the literature	Explanation, conversation, problematization, case study	1 laboratory work = 2 hours
Preparation of the balance of materials on the operations of the technological flow of manufacturing of various products.	Explanation, conversation, problematization, case study	1 laboratory work = 2 hours
Determination of specific consumption of raw materials in the manufacture of various products	Explanation, conversation, problematization, case study	1 laboratory work = 2 hours
Drawing up a sketch of the production section with the location of the equipment.	Observation, explanation, problematization, case study	1 laboratory work = 2 hours
Description of the daily activities carried out in the respective unit	Observation, conversation	1 laboratory work = 2 hours
SWOT analysis regarding the activity carried out in the respective unit.	Explanation, conversation, problematization, case study	1 laboratory work = 2 hours
Time management - tools for efficiency	Explanation, case study problematization	1 laboratory work = 2 hours
Human resources management in food units - Teamwork and interrelationship through assertiveness	Explanation, case study problematization	1 laboratory work = 2 hours
Production management - types and methods of production planning	Explanation, case study problematization	1 laboratory work = 2 hours
Quality management - principles and implementation techniques	Explanation, case study problematization	1 laboratory work = 2 hours
Individual project - Case study	Assisted presentation	2 project sessions = 4 hours

Compulsory bibliography:

Manualul inginerului de industrie alimentară, vol. I, Editura Tehnica, 2000
Manualul inginerului de industrie alimentară, vol. II, Editura Tehnica, 2002

Optional bibliography:

- Mirela Jimborean şi Dorin Ţibulcã, (2013), *Tehnologia produselor lactate – îndrumător de lucrări practice*, Editura Risoprint, Cluj-Napoca;
- Păucean Adriana, Man, Simona, (2018), Procedarea în industria morăritului şi panifcaţiei, Ed. Mega Cluj-Napoca;
- Sălăgean, D. şi Ţibulcã, D., (2009), *Tehnologia produselor din carne*, Ed. Risoprint, Cluj-Napoca;
- Sălăgean, D. şi Ţibulcã, D., (2010), *Tehnologia cărnii şi a produselor din carne* – îndrumător de lucrări practice, Ed. Risoprint
- Ţibulcã, D. şi Sălăgean, D., (2011), *Tehnologia si controlul calitatii pe fluxul tehnologic de fabricatie a*

produselor din carne, Ed. Risoprint, Cluj-Napoca.
- Ţibulcă, D. şi Jimborean Mirela, (2008), *Tehnologia de obţinere a produselor lactate,* Editura Risoprint, Cluj-Napoca;

9. Corroborating the course content with the expectations of the epistemic community representatives, of the professional associations and of the relevant stakeholders in the corresponding field

The content of the discipline is in accordance with the requests of specific national professional associations

10. Assessment

Type of activity	10.1. Assessment criteria	10.2. Assessment methods	10.3. Percentage of the final grade
10.4. Lecture	-	-	
10.5. Seminar/Laboratory	Continuous assessment	Activity evaluation form	50%
	Final assessment	Practice colloquium in which the practice documents presented by the student and the presentation of the skills and knowledge acquired by him will be analyzed	50%
10.6. Minimum performance standards			
Integral development of the technological practice activity and completion of the practice documents Description of the technological flow of the products manufactured in the profile unit Solving a concrete problem of food science based on a given algorithm.			

[1] Education levels- choose of the three options: Bachelor/ * Master/Ph.D.

[2] Discipline status (content)- for the undergraduate level, choose one of the options:- **FD** (fundamental discipline), **BD** (basic discipline), **CS** (specific disciplines-clinical sciences), **AP** (specific disciplines-animal production), **FH** (specific disciplines-food hygiene), **UO** (disciplines based on the university's options).

[3/] Discipline status (compulsoriness)- choose one of the options – **CD** (compulsory discipline) **OD** (optional discipline) **ED** (elective discipline).

[4] One credit is equivalent to 25-30 hours of study (teaching activities and individual study).

[5 / *] Disciplines: AK- Advanced knowledge, CT- Complementary Training, S- Synthesis

Filled in on
10.09.2021

Course coordinator
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Laboratory work/seminar coordinator
Borșa Andrei, PhD, Assist.

Subject coordinator
Borșa Andrei, PhD, Assist.

Approved by the Department on
22.09.2021

Head of the Department
Sevastiţa Muste PhD, Professor

Approved by the Faculty Council on
28.09.2021

Dean
Elena Mudura PhD, Professor