



No. _____ of _____

USAMV form–CN-0703040111

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	Food Science and Technology
1.3. Department	Food Engineering
1.4. Field of study	Food Engineering
1.5. Education level ¹⁾	Bachelor
1.6. Specialization/ Study programme	Food Engineering
1.7. Form of education	Full time

2. Information on the discipline

2. Information on the discipline								
2.1. Name of the discipline		Control and quality assurance in the food industry 4						
2.2. Course coordinator				Assoc. Prof. Dr. habil. Cristina Anamaria Semeniuc				
2.3. Seminar/ laboratory/ project coordinator				Eng. Dr. Maria-Ioana Socaciu				
2.4. Year of study	IV	2.5. Semester	VII I	2.6. Type of evaluation	Continuou s	2.7. Discipline status	Content ²	SD
							Compulsorine ss ³	CD

3. Total estimated time (teaching hours per semester)

3.1. Hours per week – full time programme	4	out of which: 3.2. lecture	2	3.3. seminar/ laboratory/ project	2
3.4. Total number of hours in the curriculum	56	out of which: 3.5. lecture	28	3.6. seminar/ laboratory/ project	28
Distribution of the time allotted					ore
3.4.1. Study based on book, textbook, bibliography, and notes					10
3.4.2. Additional documentation in the library, specialized electronic platforms, and field					-
3.4.3. Preparing seminars/ laboratories/ projects , subjects, reports, portfolios, and essays					9
3.4.4. Tutorials					-
3.4.5. Examinations					-
3.4.6. Other activities					-
3.7. Total hours of individual study	19				
3.8. Total hours per semester	75				
3.9. Number of credits ⁴	3				

4. Prerequisites (if applicable)

4.1. curriculum-related	Basic notions of food chemistry and biochemistry as well as food microbiology
4.2. skills-related	The student must have the necessary knowledge for proper handling of chemical reagents, glassware, utensils, and laboratory equipment

5. Conditions (if applicable)

5.1. for the lecture	Classroom, equipped with: blackboard, video projector, and computer In the case of carrying out online didactic activities, the teaching methods will be adapted
5.2. for the seminar/ laboratory/ project	Laboratory equipped with laboratory equipment, glassware, utensils, and reagents In the case of carrying out online didactic activities, the teaching methods will be adapted

6. Specific competences acquired



Professional competences	C5.1. Identification and application of the quality assurance principles of animal origin products C1.4. Assessing the qualitative characteristics of raw materials and end-products of animal origin
Transversal competences	CT1. Responsible execution of laboratory tests; analytical and critical thinking in interpreting results

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

7.1. Overall course objective	Knowledge of organoleptic, physicochemical, and microbiological criteria for assessing the quality of animal origin products
7.2. Specific objectives	Learning some methods of physicochemical analysis of food products Acquiring the ability for analysis and interpretation of test results Evaluation of food products quality based on test results

8. Contents

8.1. LECTURE	Teaching methods	Notes
Quality criteria for raw meat and meat products	Participatory lecture, debate, exemplification	1.5 lectures
Factors influencing meat quality		1.5 lectures
Criteria and methods for assessing meat quality		
Chemical composition of raw materials of animal origin and its role in determining the quality of food products		1.5 lectures
Beef meat		1 lecture
Pork, sheep, and goat meat		1 lecture
Poultry meat		1.5 lectures
Quality control of eggs		
Quality control of canned and semi-preserved meat		1.5 lectures
Quality control of animal fats		1.5 lectures
Quality control of fish and aquatic products		1.5 lectures
Quality control of honey and other bee products		1.5 lectures

8.2. PRACTICAL WORK	Teaching methods	Notes
Labour protection	Presentation, explanation, demonstration, case study	½ seminar/½ laboratory work
Presentation of practical work		
Determination of moisture in meat and meat products		½ seminar/½ laboratory work
Determination of total fat content in meat and meat products		
Determination of protein content in meat and meat products		½ seminar/½ laboratory work
Determination of total ash in meat and meat products		
Measurement of pH in meat and meat products		½ seminar/½ laboratory work
Identification of hydrogen sulphide in meat and meat products		
Determination of the oxidative state of fat (Kreis reaction) in meat, meat products, and animal fats		
Determination of sodium chloride content in meat and meat products		
Determination of easily hydrolyzable nitrogen in meat and meat products		½ seminar/½ laboratory work
Identification of ammonia in meat and meat products with Nessler reagent		
Determination of the net mass of semi-preserved and canned fish		½ seminar/½ laboratory work
Determination of the proportion of components in semi-		



preserved and canned fish Determination of total acidity in semi-preserved and canned fish		
Determination of acids soluble in water, from roe		½ seminar/½ laboratory work
Determination of water and volatile substances content in animal fats Determination of insoluble impurities content in animal fats		½ seminar/½ laboratory work
Determination of peroxide index in animal fat		½ seminar/½ laboratory work
Determination of acid value and acidity in animal fat		½ seminar/½ laboratory work
Egg candling analysis Appreciation of egg freshness in water and salted water Determination of yolk index in egg yolk Measurement of pH in egg		½ seminar/½ laboratory work
Determination of moisture in honey. Oven-drying method Determination of ash in honey Determination of acidity in honey Determination of water insoluble matter in honey		½ seminar/½ laboratory work
Identification of hydroxymethylfurfural (HMF) in honey by Fiehe reaction Identification of industrial glucose in honey by reaction with alcohol Identification of cereal flour and starch in honey by reaction with iodine Identification of gelatin and glue in honey by reaction with tannin Determination of electrical conductivity in honey Determination of pollen grain content in honey Determination of sugar micro crystals in honey		½ seminar/½ laboratory work
Test of verifying knowledge	-	½ seminar/½ laboratory work
Compulsory bibliography: 1. Course support 2. Semeniac, C.A., Pop, C.R., Socaciu, M.I. (2019). Controlul și expertiza produselor animale (Carne, produse din carne și miere)-Îndrumător de lucrări practice. Ed. Mega, Cluj-Napoca.		
Optional bibliography: 1. Semeniac, C.A., Socaciu, M.I., Vodnar, D.C. (2020). Evaluarea calității peștelui și produselor pescărești. Ed. Mega, 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

In outlining the course content and practical work were considered recommendations of food industry employers.

10. Assessment

Type of activity	10.1. Assessment criteria	10.2. Assessment methods	10.3. Percentage of the final grade
10.4. Lecture	Logical, correct, and coherent application of acquired notions	Continuous assessment	75%
10.5. Seminar/ Laboratory	Ability to perform tests in a physicochemical testing laboratory Ability to analyse and interpret test results	Test of verifying knowledge	25%
10.6. Minimum performance standards			
Execution of a laboratory test			
Elaboration of a test report			

¹ Education levels-choose of the three options-Bachelor/ Master/ Ph.D.

² Discipline status (content)-or the undergraduate level, choose one of the options-**FD** (fundamental discipline), **BD** (basic discipline), **SD** (specific discipline-food engineering), **UO** (discipline 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).



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Filled in on
06.09.2021

Course coordinator

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Semeniuc

Laboratory work/ seminars coordinator

Eng. Dr. Maria-Ioana Socaciu

Course coordinator

Assoc. Prof. Dr. habil. Cristina Anamaria Semeniuc

Approved by the
Department on
22.09.2021

Head of the Department
Prof. Dr. Sevastița Muste

Approved by the Faculty
Council on
28.09.2021

Dean
Prof. Dr. habil. Elena Mudura