UNIVERSITATEA DE ŞTIINŢE AGRICOLE ŞI MEDICINĂ VETERINARĂ CLUJ-NAPOCA
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No._____of _____ **USAMV Form 0702020110**

SUBJECT OUTLINE

1. Information on the programme

1.1. Higher education institution	University of Agricultural Sciences and Veterinary Medicine 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	Bachelor
1.6.Specialization/ Study programme	Food Control and Expertise
1.7. Form of education	Full time

2. Information on the discipline

2.1. Name of the discipline	Animal raw materials 2							
2.2. Course coordinator				Lecturer dr. Melinda Fogarasi				
2.3. Seminar/ laboratory/ project coordinator				Lecturer dr. Melinda Fogarasii				
2.4. Year of study	II	2.5. Semester	IV	2.6. Type of evaluation	Summative	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	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	28
Distribution of time allotted					hours
3.4.1. Study based on book, textbook, bibliography and notes					7
3.4.2. Additional documentation in the library, specialized electronic platforms and field					3
3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays					4
3.4.4. Tutorial					1
3.4.5. Examinations					4
3.4.6. Other activities					0
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	Food Biochemistry Food Chemistry
4.2. skills-related	-

5. Conditions (if applicable)

5.1. for the lecture	Room equipped with projector
5.2. for the seminar/ laboratory/ project	- Analysis Laboratory, Ecomilc, Soxhlet, Parnas Wagner devices; laboratory glassware, biological products, meat, milk, eggs, anatomical parts, reagents - Everyone must respect all security regulations; (eg. wearing the protective coat)

6. Specific acquired competences

Professional competences	C1.1. Recognition, description and correct use of terms specific to animal raw materials C1.3. Application of basic principles and methods in food science to solve engineering and technological problems, including those related to food safety C1.4. Evaluation of the qualitative and quantitative characteristics of raw materials of animal origin in order to optimize the technological flow and ensure the food safety of the consumer; Knowledge and identification of the component parts of the raw materials of animal origin subject to capitalization in order to obtain food products; Knowledge of the physic-chemical parameters pursued in the quality control of raw materials of animal origin; Application of basic methods in the analysis of the quality of raw materials of animal origin (training in investigations on the impact of quality parameters of raw materials of animal origin on the quality of the finished product; establishing the influence of the chemical composition of the raw material on the finished product) during the technological flow)
Transversal competences	CT1: Applying 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 professional ethics in the food field. CT2. Applying interrelationship techniques within a team; Developing the ability to integrate, communicate and work in a team; Developing the team coordination spirit; Development of organizational capacity in carrying out activities

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

7.1. Overall course objective	Acquisition by students of knowledge on the main products of animal origin (beef, pork, sheep, poultry, fish, game, mollusks, crustaceans, batrachians, caviar, eggs, honey, milk) subject to capitalization in order to obtain food , knowledge of the physico-chemical parameters pursued in the quality control of raw materials of animal origin

7.2. Specific objectives	Acquiring the theoretical and practical notions of the discipline Knowing the characteristics of animal raw materials and the criteria for assessing their quality Training in the handling of laboratory utensils and equipment Professional development by engaging in investigations on the impact of quality parameters on the quality of the finished product Involvement of students in scientific activities and innovative research Developing the ability to integrate, communicate and work in a team Developing the team's coordinating spirit Development of organizational capacity in carrying out activities

8. Content

8.1. LECTURE **Number of hours – 28**	Teaching methods	Notes
1. Meat as raw material	Lecture, heuristic conversation, explanation, video presentations	10 lectures
2. Fish meat	Lecture, heuristic conversation, explanation, video presentations	0.5 lecture
3. Roe (Caviar)	Lecture, heuristic conversation, explanation, video presentations	0.5 lecture
4. **Hunting meat**	Lecture, heuristic conversation, explanation, video presentations	0.5 lecture
5. Other meat sources	Lecture, heuristic conversation, explanation, video presentations	0.5 lecture
6. Eggs as raw material	Lecture, heuristic conversation, explanation, video presentations	0.5 lecture
7. Honey as raw material	Lecture, heuristic conversation, explanation, video presentations	0.5 lecture
8. Milk as raw material	Lecture, heuristic conversation, explanation, video presentations	1 lecture

8.2. PRACTICAL WORK **Number of hours – 28**	Theoretical presentation of practical works	1 lab work (2 hours / work)
1. Quantitative and qualitative control of meat production for cattle, swine and sheep.	Presentations, essays, bibliographical study	3 lab works
2. Identification of the species according to the anatomical features of the casing. Species identification by organ anatomy	Presentations, essays, bibliographical study	1 lab work
3. Recognition of the main fish species of freshwater and salt water and aquatic animals used in the food industry and their qualitative control	Presentations, essays, bibliographical study	1 lab work
4. Venison meat. Control of the quality of venison meat. Recognition of the main rabbits breeds specialized for meat production and their qualitative control	Presentations, essays, bibliographical study	2 lab works
5. Characterization of other sources of meat (molluscs, crustaceans, batracians).	Presentations, essays, bibliographical study	1 lab work
6. Formation, egg structure and criteria for assessing the quality of eggs	Presentations, essays, bibliographical study	2 lab works
7. The egg marketing regime	Presentations, essays, bibliographical study	1 lab work
8. Honey and apiculture products	Presentations, essays, bibliographical study	1 lab work
9. Morphophysiological basis of milk production	Presentations, essays, bibliographical study	1 lab work
10. Quality and quantity control of milk production	Presentations, essays, bibliographical study	1 lab work

Compulsory bibliography:

1. Laslo, C. şi colab., 2014, *Produse alimentare de origine animală* (partea I), Editura Risoprint, Cluj-Napoca
2. Marcu N. ş.a., 2008, *Materii prime animale*, Editura RISOPRINT, Cluj-Napoca
3. Sălăgean, C.D., Fogarasi Melinda, 2018, *Materii prime animale* - vol. 2 (manual didactic), Editura MEGA, Cluj-Napoca
4. Stănciulescu M., si col. 1968, *Producţiile animale*, Ed. Ceres, Bucureşti
5. Şteţca Gheorghe, 2010, *Tehnologii de obtinere a materiilor prime de origine animala*, Editura Risoprint, Cluj-Napoca
6. Şteţca Gheorghe, 2013, *Materii prime de origine animală – Tehnologii de obţinere*, Editura Risoprint, Cluj-Napoca

Optional bibliography:

1. Banu C. si col. 1999, Manualul inginerului de industrie alimentară, Vol. II Editura Tehnica, Bucuresti
2. Banu, C. şi colab., 2003, Procesarea industrială a cărnii, Editura Tehnică, Bucureşti
3. Laslo C., Gh. Şteţca, 2008, Controlul calitativ şi igiena produselor alimentare de origine animală, Editura Risoprint, Cluj-Napoca
4. Pastea si col. 1978, Anatomia comparativa si topografica a animalelor domestice. E.D.P. Bucuresti
5. Raicu E. si col., Producţia de carne si imbunatatirea ei. Editura Agrosilvica Bucuresti
6. Popescu Baran M. si col. Aprecierea calitatii animalelor pentru carne
7. Chintescu G. si col. 1968, Prelucrarea laptelui in ferma, Editura Agrosilvica Bucuresti
8. Pasca I., R. Morar, 2007, Cresterea animalelor si sisteme de productii animaliere, Editura Risoprint, Cluj-Napoca
9. Sarbulescu V., Stanescu V., Vacaru Opris I., Cornelia Vintila, 1983, Tehnologia si valorificarea produselor animale, E.D.P. Bucuresti
10. Şteţca Gheorghe, V. Chindis, 2010, Laptele de bivolita, igiena si calitate, Editura Risoprint, Cluj-Napoca
11. Şteţca Gheorghe, R. Morar, I. Pasca, 2010, Zootehnia generala, nutritia animala si sisteme de productii animaliere, Editura Risoprint, Cluj-Napoca
12. Şteţca Gheorghe, Mocuta N., Anamaria Pop, 2012, Strategii de management privind calitatea alimentelor, 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

It meets the requirements for a qualified training by the high degree of applicability (eg. laboratory work) and topical content of the discipline.

10. Assessment

Type of activity	10.1. Assessment criteria	10.2. Assessment methods	10.3. Percentage of the final grade
10.4. Lecture	Knowledge of the biological bases of animal productions, influencing factors and their quantitative and qualitative control; Knowledge of the main products of animal origin (beef, pork, sheep, poultry, fish, game, molluscs, crustaceans, batrachians, caviar, eggs, honey, milk) subject to recovery in order to obtain food (morphological structure, chemical composition properties, characteristics, quality conditions, criteria for assessing their quality)	Exam	70%
10.5. Seminar/Laboratory	Species determination according to the anatomical characteristics of the organs and according to the anatomical particularities of the carcass, control of meat production in cattle, pigs and sheep, morphophysiological bases of milk production, quantitative and qualitative control of milk production, formation, egg structure and assessment criteria. the quality of the eggs for consumption, the appreciation of the quality of the fish, game and rabbit meat	Colloquium	30%
10.6. Minimum performance standards			
Learning the theoretical and practical notions of the discipline at an acceptable level; Knowledge of the main products of animal origin subject to capitalization in order to obtain food products (general characteristics, chemical composition, quality conditions, etc.) at an acceptable level; The final grade is the weighted average of the exam and the colloquium on practical work and must be equal to or greater than 5 (five).			

[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
06.09.2021

Course coordinator
Lecturer dr. Melinda Fogarasi

Laboratory work/seminar coordinator
Lecturer dr. Melinda Fogarasi

Subject coordinator
Lecturer dr. Melinda Fogarasi

Approved by the
Department on
22.09.2021

Head of the Department
Prof. dr. Sevastiţa Muste

Approved by the Faculty
Council on
28.09.2021

Dean
Prof. dr. Elena Mudura