UNIVERSITATEA DE ŞTIINŢE AGRICOLE ŞI MEDICINĂ VETERINARĂ CLUJ-NAPOCA
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No_____from _____ **Form code USAMV–CN-0702040105**

COURSE DESCRIPTION

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. Study field	**Food Engineering**
1.5. Level field[1)]	**Level 1.Bachelor**
1.6. Specialization/ Study Program	**Control and expertise of food products**
1.7. Form of education	IF

2. Information on the discipline

2.1. Name of the course	**QUALITY MANAGEMENT**							
2.2. Course leader				**Assoc. Prof.PhD. Mureşan Crina**				
2.3. Coordinator of seminary/laboratory activity/project				**Lectures PhD Marc Romina**				
2.4. Year of study	**IV**	2.5. Semester	**VII**	2.6. Type of evaluation	**Summative**	2.7. Course regime	Content [2]	DS
							Level of compulsory [3]	DI

3. Total estimated time (teaching hours per semester)

3.1. Number of hours/week – frequency form	4	of which : 3.2. course	2	3.3. seminary/ laboratory/ project	2
3.4. Total hours in the curricula	56	of which: 3.5.course	28	3.6.seminary/laboratory	28
Distribution of time					Hours
3.4.1.. Study based on handbook, notes, bibliography					16
3.4.2. Extra documentation in the library, on specific electronic platforms and on field					9
3.4.3. Preparation of seminaries/ laboratories/ projects, themes, papers, portfolies and essays					10
3.4.4.Tutorial					6
3.4.5. Examination					3
3.4.6. Other activities					0
3.7. Total hours of individual study	44				
3.8. Total hours per semester	100				
3.9. Number of ECTS[4]	4				

4. Prerequisites (if applicable)

4.1. of curriculum	Food biochemistry, Food chemistry, Food microbiology, Technology for obtaining foodstuffs of plant and animal origin, Machinery and Operations, Food quality control.
4.2. of competences	The student must have knowledge related to the technological flow of food, machinery, process biochemistry, food microbiology and quality parameters.

5. Conditions (if applicable)

5.1. of course development	Classroom equipped with projection system; internet connection In the case of carrying out didactic activities online, the teaching methods will be adapted
5.2. of seminary/laboratory/ project development	Computer, projector, standards In the case of carrying out didactic activities online, the teaching methods will be

	adapted

6. Specific competences acquired

Professional competences	C5.1 Identify the specialized terminology regarding the quality, standards and good practices of food hygiene in order to collaborate and cooperate with the responsible institutions in the field of food quality and safety. C5.3 Identify issues specific to food safety and the responsibilities associated with solving them. C.6.3 Establishing risk-specific issues related to extension activities.
Transversal competences	CT1.Applying strategies of perseverance, rigor, efficiency and responsibility at work, punctuality and accountability for the results of personal activities, creativity, common sense, analytical and critical thinking, solving matters etc, by principles, norms and values of the professional ethics code in food area.

7. Subject objectives (as a result of the specific acquired competences)

7.1. Subject general objectives	Assimilation by students of the notions related to the quality management system, elaboration of quality and safety documents, GMP, GLP for a food industry unit, respectively a testing laboratory.
7.2. Specific objectives	Elaboration of specific documents quality management according to the standards in force..

8. Contents

8.1.COURSE **Number of hours – 28**	Methods of teaching	Observations
FUNDAMENTAL ASPECTS OF FOOD QUALITY AND SAFETY Introductory notions regarding food quality and safety; Management systems- HACCP, IFS, BRC; Legal requirements for food safety; Types of food hazards and main sources of contamination;	Lecture, Heuristic conversation, Explanation	3 Lectures
SAFETY MANUAL ACCORDING TO SR EN ISO 22000 Standard SR EN ISO 22000, Procedures, instructions, operating methods and records Structure of documents Writing procedures. Examples	Lecture, Heuristic conversation, Explanation	3 Lecture
RISK ANALYSIS AND CRITICAL CONTROL POINTS - HACCP General aspects, Principles, Steps, Records. Examples	Lecture, Heuristic conversation, Explanation	2 Lectures
PRELIMINARY PROGRAMS Introduction ; GLP, GMP on the food circuit; Requirements for staff working in a food factory. Example.	Lecture, Heuristic conversation, Explanation	2 Lectures
APPLICATIONS OF THE QUALITY SYSTEM IN TEST LABORATORIES Quality manual - example according to SREN ISO 17025; documents	Lecture, Heuristic conversation, Explanation	4 Lectures

8.2. PRACTICAL WORK **Number of hours – 28**		
1. Elaboration of general procedures according to 17025, 22000. Case study	Heuristic conversation, working group	2 seminars
2. Elaboration of test and operational procedures. according to 17025, 22000. Case study	Heuristic conversation, working group	2 seminars
3. Elaboration of work instructions. Case studies: laboratory equipment and equipment from pilot stations.	Heuristic conversation, working group	1 seminar
4. HACCP. Case study: pilot bakery station	Heuristic conversation, working group	2 seminars
5. HACCP. Case study: pilot station beer, wine	Heuristic conversation, working group	2 seminars
6. HACCP. Case study: pilot station produced meat	Heuristic conversation, working group	2 seminars
7. HACCP. Case study: dairy products pilot station	Heuristic conversation, working group	2 seminars
8. Colloquium to verify knowledge		1 seminar

Compulsory Bibliography:

1. Muresan Crina (2021)- Lecture notes
2. Apostu S.(2009) Managementul calitaţii totale, Editura Risoprint Cluj-Napoca
3. P.A. Luning, W.J. Marcelis, W.M.F. Jongen, (2008) – Managementul calității alimentelor o abordare tehno-managerială, Ed. Casa Cartii de Stiinta, Cluj-Napoca

Facultative Bibliography:

1. Muresan Crina, Marc Romina, (2021) Siguranta alimentara, trecut si prezent, Editura Risoprint Cluj- Napoca
2. Gabriela Rotaru, Carmen Moraru, (1997) – Analiza riscurilor punctelor critice de control, Editura Academica
3. Gilles Revoil, (1997) – Asigurarea calității în laboratoarele de analiză şi încercări, Editura Tehnică

9. Correlations between the subject against the expectations of the epistemic community representatives, of the professional associations and employers' representatives in the domain

In order to identify ways to modernize and continuously improve teaching and course content, with the latest topics and practical issues, teachers participate in the annual meeting of the Association of Food Industry Specialists in Romania, where they meet with food industry specialists in private environment and with teachers from other higher education institutions in the country. The meetings aim to identify the needs and expectations of employers in the field and coordinate with other similar programs within other higher education institutions.

10. Evaluation

Type of activity	10.1. Evaluation criteria	10.2. Evaluation methods	10.3. Percent of the final grade
10.4. Course	The logical, correct and coherent acquisition of the notions from the management systems	Oral examination	50 %
10.5. Seminary/Laboratory	The ability to put into practice theoretical knowledge. Development of a test laboratory specific procedure.	Colloquy	50 %

	Develop a HACCP plan for a food product.The usage of quality parametres determining machines. Documents elaboration in accordance with SR EN ISO 9001		

10.6. Minimal standard of performance

Writing, individually, some materials for management systems.
Obtaining the grade for the colloquium is a condition for promotion.

[1] Level of study- to be chosen one of the following - Bachelor/Post graduate/Doctoral
[2] Course regime (content) – for bachelor level it will be chosen one of the following - **DF** (fundamental subject), **DD** (subject in the domain), **DS** (specific subject), **DC** (complementary subject).
[3] Course regime (compulsory level) - to be chosen one of the following - **DI** (compulsory subject), **DO** (optional subject), **DFac** (facultative subject)
[4] One ECTS is equivalent with 25-30 de hours of study (didactical and individual study).

Filled in on
08.09.2021

Course coordinator
Assoc. Prof.PhD. Mureșan Crina

Laboratory work/seminar coordinator
Lectures PhD Marc Romina

Subject coordinator
Assoc. Prof.PhD. Mureșan Crina

Approved by the Department on
22.09.2021

Head of the Department
Prof. PhD Sevastiţa Muste

Approved by the Faculty Council on
28.09.2021

Dean
Prof. PhD Elena Mudura