No_____from _____ **Form code USAMV–CN-0701040216**

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. Study field	**Food Engineering**
1.5. Level field[1)]	**Level 1.Bachelor**
1.6. Specialization/ Study Program	**Technology of Agricultural Products Processing**
1.7. Form of education	IF

2. Information on the discipline

2.1. Name of the course	**Food safety and security**							
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	continue	2.7. Course regime	Content [2]	DD
							Level of compulsory [3]	DO

3. Total estimated time (teaching hours per semester)

3.1. Number of hours/week – frequency form	3	of which : 3.2. course	2	3.3. seminary/ laboratory/ project	1
3.4. Total hours in the curricula	42	of which: 3.5.course	28	3.6.seminary/laboratory	14
Distribution of time					Hours
3.4.1.. Study based on handbook, notes, bibliography					8
3.4.2. Extra documentation in the library, on specific electronic platforms and on field					8
3.4.3. Preparation of seminaries/ laboratories/ projects, themes, papers, portfolies and essays					8
3.4.4.Tutorial					4
3.4.5. Examination					5
3.4.6. Other activities					
3.7. Total hours of individual study	33				
3.8. Total hours per semester	75				
3.9. Number of ECTS[4]	3				

4. Prerequisites (if applicable)

4.1. of curriculum	Biochemistry, Microbiology, General technologies
4.2. of competences	The student must have basic knowledge on chemical composition of food, special notions of microbiology, technology of obtaining food.

5. Conditions (if applicable)

5.1. of course development	Projector, presentation In the case of carrying out didactic activities online, the teaching methods will be adapted
5.2. of seminary/laboratory/	Computer, projector, standards

project development	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 safety management, standards and good practices, in order to collaborate and cooperate with the responsible institutions in the field of food quality and safety. C5.3 Identify the problems specific to safety management and the responsibilities related to solving them.
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	To a knowledge the information regarding safety measures and food security on the food chain, in order to create safe products.
7.2. Specific objectives	To understand the importance of safety measures when creating a products, in accordance with the stipulated legislation. To accurately identify the potential dangers during the stages of the food chain. To be aquinted with the principles of writing a HACCP plan. To know the steps that are necessary in organizing, implementing and the management of the food safety system.

8. Contents

8.1.COURSE **Number of hours – 28**	Methods of teaching	Observations
EU reglementation regarding food safety. General aspects of food security.	Lecture, Heuristic conversation, Explanation	1 Lecture
GLP, GMP- registration of documents,and exemples		2 Lectures
SR EN ISO 17025- General considerations		2 Lectures
HACCP system :General considerations The terminology used in the projection and implementation of a HACCP system.		3 Lectures
SR EN ISO 22000;		2 Lectures
The documents of a management system for food safety.		3lectures
Safety system implementation. Work visit; Case study	Conversation, Explanation	1 lectures

8.2. PRACTICAL WORK **Number of hours – 14**		
Case study – the projection of HACCP system in a unit of obtaining, processing and storage and opening of	Heuristic conversation, working group	2 seminars

products that are of animal origin Case study – the projection of HACCP system in a unit of obtaining, processing and storage and opening of products that are of vegetal origin The evaluation of system procedures. The evaluation of work procedures, operational procedures. Written evaluation	Heuristic conversation, working group Heuristic conversation, working group	2 seminars 2 seminars 1 seminars
Compulsory Bibliography: *1.* Muresan Crina 2020-Lecture notes *2.* Apostu Sorin, 2009, Managementul calității totale, Editura Risoprint Cluj Napoca *3.* Muresan Crina, Marc Romina, 2021, Siguranta alimentara-trecut si prezent, Editura Risoprint Cluj Napoca		
Facultative Bibliography: *1.* Banu, C., col., 2007, *Suveranitate, securitate şi siguranţă alimentară*, Editura ASAB, Bucureşti 2. Banu, C. ,col., 1998, *Manualul inginerului de industrie alimentară, vol. I.* Editura Tehnică, Bucureşti 3. Banu, C. ,col., 1999, *Manualul inginerului de industrie alimentară, vol. II.* Editura Tehnică, Bucureşti		

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

Course content is consistent with national professional associations specific applications.

10. Evaluation

Type of activity	10.1. Evaluation criteria	10.2. Evaluation methods	10.3. Percent of the final grade
10.4. Course	Knowledge of notions related to GLP, GMP ; laboratory management systems/food industry . The structure of specific documents.	Exam	50 %
10.5. Seminary/Laboratory	The ability to develop a documents for the safety management system.	Portfolio overview	50 %
10.6. Minimal standard of performance			
Good command of scientific information submitted by lectures and the construction of the portfolio at an acceptable level.			

[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 hours of study (didactical and individual study).

Course coordinator
Assoc. Prof.PhD. Crina Mureșan

Laboratory work/seminar coordinator
Lectures PhD Romina Marc

Filled in on
06.09.2021

Subject coordinator
Assoc. Prof.PhD. Mureșan Crina

Head of the Department
Prof. univ. dr. Sevastiţa Muste

Approved by the Department on
22.09.2021

Dean
Prof. univ. dr. Elena Mudura

Approved by the Faculty Council on

28.09.2021