UNIVERSITATEA DE ŞTIINŢE AGRICOLE ŞI MEDICINĂ VETERINARĂ CLUJ-NAPOCA
Calea Mănăştur 3-5, 400372, Cluj-Napoca
Tel: 0264-596.384, Fax: 0264-593.792
www.usamvcluj.ro

No_____from _____ **Form code USAMV–CN 0705020102**

COURSE DESCRIPTION

1. D General data

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)]	**Master**
1.6. Specialization/ Study Program	**Systems for the processing and control of food quality**
1.7. Teaching Form	**IF**

2. Course characteristics

2.1. Name of the course	**HYGIENIC NORMS IN THE DESIGN OF EQUIPMENT AND SPACES IN THE FOOD INDUSTRY**							
2.2. Course leader				Associate PhD. Dorin ŢIBULCĂ				
2.3. Coordinator of laboratory/seminary/project				Associate PhD. Dorin ŢIBULCĂ				
2.4. Year of study	**II**	2.5. Semester	**III**	2.6. Type of evaluation	**summative**	2.7. Course regime	Content [2]	DD
							Level of compulsory [3]	DI

3. Total estimated time (hours/semester of the teaching activities)

3.1. Number of hours/week – frequency form	2	of which : 3.2. course	1	3.3. seminary/ laboratory/ project	1
3.4. Total hours in the curricula	28	of which: 3.5.course	14	3.6.seminary/laboratory	14

Distribution of time	Hours
3.4.1.. Study based on handbook, notes, bibliography	25
3.4.2. Extra documentation in the library, on specific electronic platforms and on field	15
3.4.3. Preparation of seminaries/ laboratories/ projects, themes, papers, portfolies and essays	21
3.4.4.Tutorial	3
3.4.5. Examination	8
3.4.6. Other activities	0

3.7. Total hours of individual study	72
3.8. Total hours per semester	100
3.9. Number of ECTS[4]	4

4. Pre-conditions (where appropriate)

4.1. of curriculum	Unit Operations in the food Industry, Equipment used in food industry, Food microbiology, Food preservation methods, Food quality and food quality and safety management systems, Hygiene of food industry units, Food technologies, Bachelor's degree
4.2. of competences	The student must have knowledge of operations and equipment in the food industry, food microbiology, principles and methods of food preservation, food technologies, food hygiene The student must identify, describe and use appropriately the specific notions of food quality, food quality and safety management, management systems, requirements.

5. Conditions (where appropriate)

5.1. of course development	Development of the topic proposed in the discipline sheet and interactive discussions based on the previously announced materials and bibliography, doubled by materials presented on the video projector.

	In the case of the didactic activity carried out online, the teaching methods are adapted.
5.2. of seminary/laboratory/ project development	Students prepare projects based on established topics. In the case of the didactic activity carried out online, the teaching methods are adapted.

6. Specific acquired competences

Professional competences	C6.1 Understand the principles regarding the design of new processes / products in the food industry C6.2 Analysis and identification of stages for productor process design in the food industry C6.3 Integrated use of classical and modern technologies for food production C6.4 Use of modern methods to evaluate the performance / characteristics of the product / process C6.5 Development of product / process development projects in a food industry unit
Transversal competences	CT1 Realization of complex, interdisciplinary, individual projects CT2 Realization of complex, interdisciplinary projects, with the coordination of a team

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

7.1. Subject general objectives	Mastering the hygienic norms regarding the food industry units Knowledge of sanitary-veterinary norms regarding the sanitation of animal products Acquiring knowledge about food production technologies Explain and interpret ideas, projects, processes, as well as the theoretical and practical contents of the discipline
7.2. Specific objectives	To understand and know the language specific to the discipline Acquiring the sanitary-veterinary norms regarding the food industry units regarding: - location of units; - unit design; - building units; - the distribution of the territory and the establishment of the locations of the constructions, installations inside the units; - providing technological installations and equipment and their location; - providing utensils, installations and equipment in order to sanitize the units; - elaboration of documentations for developments, modernizations Correlation with other disciplines specific to the specialization.

8. Contents

8.1. COURSE **Number of hours – 14**	**Methods of teaching**	**Observations**
Sanitary-veterinary norms regarding the design of units in the food industry (location, water supply, sewerage and waste disposal)	Developing the theme and interactive discussions, projector	1/2 lecture (1 hour)
Sanitary-veterinary norms regarding the construction of units in the food industry - spaces for production; - storage spaces; - laboratories (elements for constructions, installations, type of spaces - constructive characteristics and endowment); - social-sanitary spaces; - special sanitary-veterinary norms for the meat industry	Developing the theme and interactive discussions, projector	1 1/2 lectures (3 ore)

Sanitary-veterinary norms regarding the distribution of the territory and the location of the buildings inside the meat, fish and milk processing units - slaughterhouses for animals; - slaughterhouses for poultry; - meat processing factories (meat preparations, canned and semi-canned meat, raw-dried salamis, meat culinary preparations), cold stores; - fish canning and semi-canning factories; - specialized refrigerated warehouses for cold preservation of fish; - milk processing units	Developing the theme and interactive discussions, projector	2 1/2 lectures (5 ore)
Sanitary-veterinary norms regarding the endowment with technological and hygienic machinery and equipment of the food industry units - construction of technological machinery and equipment; - location of technological machinery and equipment; - transport insurance; - endowment with sanitation equipment	Developing the theme and interactive discussions, projector	1 lecture (2 ore)
Sanitary-veterinary norms regarding the endowment and operation under hygienic-sanitary aspect of the food industry units	Developing the theme and interactive discussions, projector	1 1/2 lectures (3 ore)

8.2. PROJECT **Number of hours – 14**		
Case study: Preparation of a project **The productive and non-productive spaces and the endowment with specific machinery and equipment of a food industry unit will be established in compliance with the specific hygiene norms imposed by the legislation in the field.**	Simulation of situations, methods of group work, individual and frontal, methods of developing critical thinking, interactive discussions; heuristic discussion	6 seminars (12 hours)
Knowledge verification. Carrying out and presenting a case study based on the pre-established topic.	Reports; PPT presentation; video; interactive discussions; heuristic discussion	1 seminars (2 hours)

Compulsory Bibliography:
1. Banu C. (coordonator), 2009, *Tratat de industrie alimentară*, Ed. ASAB, Bucureşti
2. Bănăţeanu, I. A., Teveloiu, I., 1987, *Cerinţe sanitare veterinare privind proiectarea, construirea şi dotarea întreprinderilor pentru industrie alimentară*, Ed. Ceres, Bucureşti.
3. ** * * – Legea sanitară veterinară nr. 60/1974 republicată în Monitorul Oficial după modificarea prin Legea nr. 75/1991*.

Facultative Bibliography:
1. Decun, M. şi Stoiţa, M., 1999, *Legislaţie pentru managementul calităţii produselor de origine animală*, Ed. Mirton, Timişoara
2. Stănescu, V., Apostu, S., 2010, *Igiena, inspecţia şi siguranţa alimentelor de origine animală*, vol. 1, 2, 3, Ed. Risoprint, Cluj-Napoca
3. Stănescu, V., 1998, *Igiena si controlul alimentelor*, Ed. Fundaţiei ,,România de mâine", Bucuresti
4. *** ISO 22000:2005
5. *** Legea 150: 2004 privind siguranta alimentara
6. *** Seria standarde ISO 9000
7. *** Legea nr. 245 din 09/06/2004 - privind securitatea generala a produselor;
8. *** Regulamentul CE nr. 853/2004 al Parlamentului European și al Consiliului de stabilire a unor norme specifice de igienă care se aplică alimentelor de origine animală;
9. *** Regulamentul CE nr. 2073/2005 al Comisiei privind criteriile microbiologice pentru produsele alimentare;
10. *** Ordin nr. 1.956/1995 privind introducerea şi aplicarea sistemului HACCP (Hazard Analysis Critical Control

Point) în activitatea de supraveghere a condiţiilor de igienă din sectorul alimentar;
11. *** Ordin nr. 611/1995 pentru aprobarea Normelor de igienă privind alimentele şi protecţia sanitară a acestora;
12. *** Ordin al ministrului sănătăţii nr. 975/1998 privind aprobarea Normelor igienico-sanitare pentru alimente;
13. *** Ordin al ministrului sănătăţii nr. 976/1998 pentru aprobarea Normelor de igienă privind producţia, prelucrarea, depozitarea, păstrarea, transportul şi desfacerea alimentelor;
14. *** Hotărârea Guvernului nr. 1198/2002 pentru aprobarea Normelor de igienă a produselor alimentare

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

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

10. Evaluation

Type of activity	10.1. Evaluation criteria	10.2. Evaluation methods	10.3. Percent of the final grade
10.4. **Course**	Master students' mastery of hygiene norms when designing food industry units	Written exam, grid test	50%
10.5. Laboratory	Knowledge by each master student of the hygiene norms specific to the food industry units when designing the spaces and equipment. Participate & Get Involved.	Project preparation and support	50%
10.6. Minimal standard of performance			
Elaboration of a technological project			

[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 de hours of study (didactical and individual study).

Filled in on
09.09.2021

Course coordinator
Associate Professor PhD. Dorin Ţibulcă

Laboratory work/seminar coordinator
Associate Professor PhD. Dorin Ţibulcă

Subject coordinator
Associate Professor PhD. Dorin Ţibulcă

Approved by the Department on
22.09.2021

Head of the Department
Professor PhD. Sevastiţa Muste

Approved by the Faculty Council on
. ***28.09.2021***

Dean
Professor PhD. Elena Mudura