UNIVERSITATEA DE ŞTIINŢE AGRICOLE ŞI MEDICINĂ VETERINARĂ CLUJ-NAPOCA
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No._____of _____ **USAMV form 0704010209**

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	Faculty of Food Science and Technology
1.3. Department	Food Engineering
1.4. Field of study	Food Engineering
1.5.Education level	Post graduate
1.6.Specialization/ Study programme	Food Quality Management (English)
1.7. Form of education	Full time

2. Information on the discipline

2.1. Name of the discipline	**Good practices in producing raw agrifood products**							
2.2. Course coordinator				Vlad Mureşan, PhD, habil., Associate Professor				
2.3. Seminar/ laboratory/ project coordinator				Vlad Mureşan, PhD, habil., Associate Professor				
2.4. Year of study	I	2.5. Semester	**I**	2.6. Type of evaluation	continuous	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	2	out of which: 3.2. lecture	1	3.3. seminar/ laboratory/ project	1
3.4. Total number of hours in the curriculum	28	Out of which: 3.5.lecture	14	3.6.seminar/laboratory	14
Distribution of the time allotted					hours
3.4.1. Study based on book, textbook, bibliography and notes					5
3.4.2. Additional documentation in the library, specialized electronic platforms and field					27
3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays					30
3.4.4. Tutorials					5
3.4.5. Examinations					5
3.4.6. Other activities					
3.7. Total hours of individual study	72				
3.8. Total hours per semester	100				
3.9. Number of credits[4]	4				

4. Prerequisites (is applicable)

4.1. curriculum-related	Knowledge of: Raw agrifood materials food chemistry and biochemistry.
4.2. skills-related	Certificate of linguistic competence (English) Master's student must know the chemical composition and characteristics of the main food groups.

5. Conditions (if applicable)

5.1. for the lecture	The course is interactive, students can ask questions regarding the content of lecture. Academic discipline requires compliance with the start and end of the course. We do not allow any other activities during the lecture, mobile phones will be turned off. Location and facilities: Classroom equipped with: board, projector and computer
5.2. for the seminar/ laboratory/ project	During practical works, each student will develop an individual activity with laboratory materials (made available in the book that describes the laboratory work). Academic discipline is imposed throughout the course of practical works.

6. Specific competences acquired

Professional competences	C1.4 Use of food quality and safety management knowledge to implement GMP, GAP, GLP, HACCP programs C1.5 Carrying out specialized expertise and audit in the field of food quality and safety
Transversal competence	CT1 Realization of complex, interdisciplinary, individual projects

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

7.1. Overall course objective	Is to know, use and understand the good agricultural practices in the production of agro-food raw materials
7.2. Specific objectives	Knowledge of best practices in obtaining agrifood products; Design and development of specific operational programs based on GAP; Correlation with other courses specific to food industry quality and safety systems, concerning the content of international management standards; Explain and exemplify the notions; Fostering active participation of master students.

8. Content

8.1.LECTURE **Number of hours – 14**	Teaching methods	Notes
General considerations on food raw materials production. Standardization of agriculture. Diet-health relationship, fundamental aspect of food security. FAO's role in animal production. Steps to sustainable livestock	Lecture, explanation, heuristic conversation, debate	1 lecture
Good practices in production and storage of cereals and legumes	Lecture, explanation, heuristic conversation, debate	1 lecture
Good practices in production and storage of horticultural products	Lecture, explanation, heuristic conversation, debate	1 lecture
Good Agricultural Practices for dairy farming. 1. Animal health 2. Milking hygiene 3. Animal feeding and water 4. Animal welfare 5. Environment 6. Socio-economic management	Lecture, explanation, heuristic conversation, debate	1 lecture
Good Agricultural Practices for livestock – meat as raw agri-food product 1. General farm management 2. Animal health management 3. Veterinary medicines and biologicals 4. Animal feeding and watering 5. Environment and infrastructure 6. Animal and product handling	Lecture, explanation, heuristic conversation, debate	1 lecture
Good Agricultural Practices in egg productions farms *1. Farm components* (1.1 Farm location; 1.2 Farm layout; 1.3 Housing) *2. Feed and water* (2.1 Feed supply; 2.2 List of veterinary products and banned chemicals; 2.3 Water quality and treatment of water)	Lecture, explanation, heuristic conversation, debate	1 lecture

3. Farm management (3.1 Farm manual; 3.2 Personnel; 3.3 Competency; 3.4 Hygiene and sanitation *4. Chicken health management* (4.1 Introduction of new stock; 4.2 Surveillance and control of diseases; Laboratory testing, Protocols when disease is suspected, Treatment, Animal welfare *5. Transportation and storage* (5.1 Transportation 5.2 Storage) *6. Record keeping* *7. Egg management* (7.1 Egg collection, 7.2 Sorting and grading, 7.3 Storage,7.4 Transportation)		
Good Agricultural Practices for Apiculture *Site Selection/Management* *Apiary Establishment* 1 Obtaining Bees 2 Bee Housing 3 Registration of Apiary 4 Transportation of Bees 5 Apiary Management 6 Hive Management 7 Pest and Disease Management 8 Apiary/Hive Sanitation 9 Pre-harvesting 10 Harvesting Extraction of Honey 11 Post-harvest 12 Storage *Waste Disposal* 1 Employee Welfare and Safety 2 Personal Hygiene 3 First Aid 4 Record Keeping/Traceability	Lecture, explanation, heuristic conversation, debate	1 lecture

8.2. PRACTICAL WORK **Number of hours – 14**	Teaching methods	Notes
Case studies - GAP for cereals and legumes	Case study, simulation of situations, methods of group work, individual	1 project
Case studies - GAP for fruits	Case study, simulation of situations, methods of group work, individual	1 project
Case studies - GAP for vegetables	Case study, simulation of situations, methods of group work, individual	1 project
Case studies - GAP for dairy farming	Case study, simulation of situations, methods of group work, individual	1 project

	work, individual	
Case studies - GAP for egg production farms	Case study, simulation of situations, methods of group work, individual	1 project
Case studies - GAP for apiculture	Case study, simulation of situations, methods of group work, individual	1 project

Compulsory bibliography:

1. GLOBAL G.A.P. (2018). Information avaibale at https://www.globalgap.org/uk_en/
2. Mark C. Eisler, Michael R. F. Lee et al. (2014). Steps to sustainable livestock Nature 507: 32-34
3. Dr Dale Arey and Phil Brooke (2006). Animal Welfare Aspects of Good Agricultural Practice: pig production. Compassion in World Farming
4. Downey, W.D. (1996), The Challenge of Food and Agri Products Supply Chains, in: J.H. Trienekens and P.J.P. Zuurbier (eds.), *Proceedings of the 2nd International Conference on Chain Management in Agri- and Food*
5. ALEXANDRATOS, N. (1995) *World Agriculture: Towards 2010.* Rome: Food and Agriculture Organization and Chichester: Wiley.

Optional bibliography:

1. *McMichael, P. (2001) The impact of globalisation, free trade and technology on food and nutrition in the new millennium. Proceedings of the Nutrition Society, 60 pg. 215-220.*
2. Ellram, L., Cooper, M. (1993), Characteristics of supply chain management and the implications for purchasing and logistics strategy, International Journal of Logistics Management, Vol. 4 No.2, pp.
3. Estabrook, R., 2000, *Agriculture and food production. Food Insight Media Guide on Food Safety and Nutrition*. International Food Information Council (IFIC) Foundation, Washington D.C., USA
4. Martinez, S.W., Reed, A. (1996), *From Farmers to Consumers. Vertical Coordination in the Food Industry*, Washington, DC:USDA/ERS.
5. TROTH, J. R., 2001, *Policing the organic field*. Food Science and Technology Today, 15(1):41-44.

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

The content of the discipline is in line with the demands of the specific national professional associations.
In order to identify ways of modernization and continuous improvement of the teaching and content of the courses, with the most current themes and practical problems, the teachers participate at the annual meeting of the Association of Food Industry Specialists in Romania, where they meet with the food industry specialists from the private environment and the teaching staff from other higher education institutions in the country. Meetings aim at identifying the needs and expectations of employers in the field and coordinating with other similar programs within other higher education institutions.

10. Assessment

Type of activity	10.1. Assessment criteria	10.2. Assessment methods	10.3. Percentage of the final grade
10.4. Lecture	General and particular aspects of good agricultural practices in the production of agri-food raw materials.	Continuous assessment	50%
10.5. Seminar/Laboratory	Good agricultural practices in producing raw agrifood products	Presentation and submission of individual GAP projects	50%
10.6. Minimum performance standards			

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individual GAR project. The assessment of the knowledge and skills acquired by students is carried out in accordance with Article 144 (3) of the National Education Law, by full notes from 10 to 1, note 5 certifying the achievement of the minimum competences related to the discipline and passing the examination.

[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
10.09.2021

Course coordinator
Vlad Mureşan, PhD, habil., Associate Professor

Laboratory work/seminar coordinator
Vlad Mureşan, PhD, habil., Associate Professor

Subject coordinator
Vlad Mureşan, PhD, habil., Associate Professor

Approved by the Department on
22.09.2021

Head of the Department
Sevastita Muste, PhD Professor

Approved by the Faculty Council on
28.09.2021

Dean
Elena Mudura, PhD Professor