



Nr. _____ din _____

Formular USAMV–CN-0704020206

COURSE DESCRIPTION

1. General data

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. Study field	Food Engineering
1.5. Study level ¹⁾	Post graduate
1.6. Specialization/ Study Program	Food Quality Management
1.7. Teaching Form	Full time

2. Course Characteristics

2.1. Name of the course	Product Design							
2.2. Course leader	Lecturer Ph.D. Teodora Coldea							
2.3. Coordinator of the laboratory/seminar activity	Lecturer Ph.D. Teodora Coldea							
2.4. Year of study	II	2.5. Semester	I	2.6. Type of Evaluation	Summative	2.7. Course regime	Content ²	DS
							Level of compulsory ³	DO

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

3.1. Number of hours/week– frequency form	2	of which care: 3.2. course	1	3.3. seminar/ laboratory/ project	1
3.4.Total hours in the curricula	28	Of which: 3.5.course	14	3.6.seminar/laboratory	14
Distribution of time					
3.4.1.Study based on handbook, notes, bibliography					20
3.4.2. Extra documentation in the library, on specific electronic platforms and on field					15
3.4.3. Prepare the seminars / laboratories / projects, theme, essays, reports, portofolio					17
3.4.4.Tutorial					6
3.4.5.Examination					4
3.4.6. Other activities					
3.7. Total hours of individual study	62				
3.8. Total hours per semester	90				
3.9. Number of ECTS ⁴	3				

4. Pre-conditions (where is the case)

4.1. of curriculum	Quality Assurance in the Agrifood Chain
4.2. of competences	Bachelor diploma or equivalent Certificate of language competence (english)

5. Conditions (where is the case)

5.1. of course development	Classroom equipped with videoprojector
5.2. of seminar/laboratory/project development	Seminar room equipped with projector; food technologies pilot plants



	Safety and secure rules for laboratory/ pilot plants must be respected. The access is not allowed without safety equipment.
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6. Specific acquired competences

P r o f f e s i o n a l c o m p e t e n c e s	C6.1 Understand the principles of designing new products in the food industry C6.2 Analysis and identification of stages for product or 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 Develop a product / process development project in a food industry unit
T r a n s v e r s a l c o m p e t e n c e s	▪ To demonstrate ability to integrate, communicate and work in a team ▪ To be able to develop interdisciplinary projects on food safety and quality ▪ To be able to think about good scientific practice of food processing ▪ To demonstrate concern about continuous improvement ▪ To participate in research programs in food science and technology

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

7.1. Subject general objectives	Product Design course provides knowledge's and skills in researching, designing, reviewing, planning, making, testing and evaluating of food products.
7.2. Specific objectives	▪ Advanced knowledge of the food product design



	▪ Ability to development new product ▪ Ability to provide quality assurance of food chain
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8. Content

8.1.COURSE Number of hours –14	Methods of teaching	Observations
1. Introduction in food product design	Lectures	1 lecture (1 hours)
2.The design process	Lectures	1 lecture (1 hours)
3 Steps in product design and process development	Lectures	1 lecture (1 hours)
4 Product testing	Lectures	2 lectures (2 hour)
5 Product formulation	Lectures	2 lectures (2 hours)
6 Packaging development	Lectures	2 lectures (2 hours)
7 Process development	Lectures	1 lecture (2 hours)
8 Building the marketing	Lectures	1 lecture (1 hours)
9 Product and process specifications and marketing strategy	Lectures	1 lecture (2 hours)

8.2.PRACTICAL WORK Number of hours – 14		
1. Quality Function Deployment – a method for developing a design quality product.	Seminars	2 seminar (4 hours)
2. Application of a quality function deployment technique to design and develop food products	Seminars, Case study.	5 seminars (10 hours)
<i>Compulsory bibliography:</i> 1. Anita R. Linnemann, Catharina G.P.H. Schroën and Martinus A.J.S. van Boekel, 2011. Food product design. An integrated approach. Wageningen Academic Publishers. ISBN: 978-90-8686-173-6. 2. Jacqueline H. Beckley (Editor), Leslie J. Herzog (Editor), M. Michele Foley (Editor), 2017. Accelerating New Food Product Design and Development, Second Edition, Wiley ISBN: 978-1-119-14932-3 3. Akao, Y., ed. (1990). Quality Function Deployment, Productivity Press, Cambridge MA. Becker Associates Inc, http://www.becker-associates.com/thehouse.HTM and http://www.becker-associates.com/qfdwhatis.htm 4. Hauser, J. R. and D. Clausing (1988). "The House of Quality," The Harvard Business Review, May-June, No. 3, pp. 63-73 5. Lowe, A.J. & Ridgway, K. Quality Function Deployment, University of Sheffield, http://www.shef.ac.uk/~ibberson/qfd.html, 2001 6. Quality function deployment: A literature review. 7. Codex Alimentarius Standards (http://www.codexalimentarius.org/standards/en/) 8. European Union: European Food Safety Authority (http://www.efsa.europa.eu/) 9. Food and agriculture Organisation (http://www.fao.org/home/en/) 10. Institut of Food Science and Technology (http://www.ifst.org) <i>Optional bibliography:</i> 1. Luning P.A., W.J.Marcelis, W.M.F.Jongen, Food Quality management, a techno-managerial approach, Wageningen Pres, 2002 2. *** ISO 9001:2008 Quality management systems – Requirements 3. *** ISO 22000:2005 Food safety management systems - Requirements for any organization in the food chain		

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

Course curriculum meets the requirements for a qualified preparation by the high degree of applicability (eg product design for different areas of the food industry) and topical content (compliance with legal regulations, compliance with the latest standards in the field)
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10. Evaluation

Type of activity	10.1. Evaluation criteria	10.2. Evaluation methods	10.3. Percent of the final grade
10.4. Course	Students can either design and make one product or different food products	Continuously (E)	Admitted or rejected
10.5. Seminar/Laboratory	Apply the principles of Quality Function Deployment to product and process design	Poster presentation	100%
10.6. Minimal standard of performance Course: Minimal standards: Admitted Seminars: Minimal standard: mark 5			

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
Lecturer PhD. Teodora Emilia Coldea

Laboratory work/seminar coordinator
Lecturer PhD. Teodora Emilia Coldea

Subject coordinator
Prof. PhD. Elena Mudura

Approved by the
Department on 22.09.2021

Head of the Department
Prof. PhD. Sevastița Muste

Approved by the Faculty
Council on 28.09.2021

Dean
Prof. PhD. Elena Mudura