



Nr. \_\_\_\_\_ din \_\_\_\_\_

USAMV form 0704010211

## SUBJECT OUTLINE

### 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 Science
1.4. Field of study	Food Engineering
1.5. Education level	Master
1.6. Specialization/ Study Program	Food Quality Management
1.7. Form of education	Full time

### 2. Course Characteristics

2.1. Name of the course		Usage Oriented Product Design						
2.2. Course leader				Prof. univ. dr. Vodnar Dan				
2.3. Coordinator of the laboratory/seminar activity				Prof. univ. dr. Vodnar Dan				
2.4. Year of study	I	2.5. Semester	I	2.6. Type of evaluation	Summative	2.7. Course regime	Content <sup>2</sup>	DS
							Level of compulsory <sup>3</sup>	DI

### 3. Total estimated time (teaching hours per semester)

3.1. Hours per week – full time programme	2	of which: 3.2. lecture	1	3.3. seminar/ laboratory/ project	1
3.4. Total number of hours in the curriculum	28	of which: 3.5. lecture	14	3.6. seminar/laboratory	14
<b>Distribution of the time allotted</b>					hours
3.4.1. Study based on book, textbook, bibliography and notes					10
3.4.2. Additional documentation in the library, specialized electronic platforms and field					15
3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays					15
3.4.4. Tutorials					2
3.4.5. Examinations					5
3.4.6. Other activities					0
3.7. Total hours of individual study	47				
3.8. Total hours per semester	75				
3.9. Number of credits <sup>4</sup>	3				

### 4. Pre-conditions (is applicable)

4.1. of curriculum	Introduction to the Agrifood Quality, Techno-managerial principles in the agrifood chain
4.2. of competences	The student must have knowledge about Food Quality and Quality Control

### 5. Conditions (where is the case)

5.1. of course development	Teaching manuals: Concept research in food product design and development Lecture notes: Usage Oriented Product Design Course presentation in pptx format: course Holder: Dan Vodnar Logistic support: video projector, interactive whiteboard and PowerPoint presentations. Participation in a minimum of 50% of courses is a condition for participation in the exam.
5.2. of seminar/laboratory/project	Teaching manuals: Concept research in food product design and development Laboratory/seminar notes: Usage Oriented Product Design Place of laboratory: seminar room



	<p>Laboratory equipment: not the case.          Specialized Software used:          Specific laboratory reagents/supplies          Participation in 100% laboratory/seminar work is a condition for the exam participation.</p>
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## 6. Specific acquired competences

Professional competences	<p>C5 Track food trends: Examines findings and behaviors to understand customer trends, characteristics, or qualitative desires. Utilizes this information for product development, product improvement, and packaging requirements.</p>
Transversal competences	<p>CT2 Think innovatively: Develops ideas or draws conclusions that lead to the creation and implementation of innovations or changes.</p>

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

7.1. Overall course objective	<p>Domain discipline of advanced knowledge that allows the development of knowledge regarding usage-oriented product design.          Together with the other disciplines in the curriculum, it ensures the implementation and formation of complex concepts on Food Quality Management.</p>
7.2. Specific objectives	<p>Obtaining learning outcomes that aim the formation of skills and abilities based on the correlation of the information received with those acquired in other disciplines such as understanding the specific design of the food products.</p>

## 8. Content

8.1. COURSE Number of hours – 14	Teaching methods	Notes
<p><b>Introduction in usage-oriented product design.</b>            What is the concept of usage-oriented product design in food industry? Usability of consumer food products</p>	Lecture	1 Lecture
<p><b>Design process of consumer food products.</b>            The principles of designing products in the food industry. Analysis and identification of stages for product or process design in the food industry</p>	Lecture	1 Lecture
<p><b>Formulation of design requirements.</b>            Insights in the wishes and needs of future users of the “to be designed” food products. A program of wishes and needs.</p>	Lecture	2 Lectures
<p><b>Ergonomics of food products and workplaces.</b>            Ergonomics theories and concepts, methods to perform ergonomics research, ergonomics quality, group of users, interaction between user and food products.</p>	Lecture	2 Lectures
<p><b>Integrated use of classical and modern technologies for food production.</b>            User and product characteristics. Modern methods for evaluating the performance/characteristics of the product/process</p>	Lecture	1 Lecture



<b>8.2. PRACTICAL WORK</b>		
<b>Number of hours – 14</b>		
Set up of a usability study: prepare, execute and report a usability study for a food product.	Study of usage-oriented food product design	1 project work
Ergonomic study of a food product given certain group of consumers.	Study of usage-oriented food product design	2 project work
Formulate a program of wishes and demands for the redesign of a consumer food product.	Study of food product design	2 project work
Integrated use of classical and modern technologies for food product design and modern methods for evaluating its performance/characteristics	Study of food product design	2 project work
<i>Compulsory bibliography:</i> <i>Moskowitz, H. R., Porretta, S., &amp; Silcher, M. (2008). Concept research in food product design and development. John Wiley &amp; Sons.</i>		
<i>Optional bibliography</i> <i>Aramouni, F., &amp; Deschenes, K. (2014). Methods for developing new food products: An Instructional Guide. DEStech Publications, Inc.</i> <i>Van Kuijk, J., van Driel, L., &amp; van Eijk, D. (2015). Usability in product development practice; an exploratory case study comparing four markets. Applied ergonomics, 47, 308-323.</i>		

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

The course has a similar content compared with other European universities courses and takes into account the level of preparation of students.
The course is important / fundamental for the development of working skills as future specialists in the graduated field.

**10. Assessment**

Type of activity	10.1. Assessment criteria	10.2. Assessment methods	10.3. Percent of the final grade
<b>10.4. Lecture</b>	Logical, correct and consistent application of the acquired notions Design process of consumer food products Integrated use of classical and modern technologies for food production.	Continuous assessment	50%
<b>10.5. Seminar/Laboratory</b>	Acquiring professional skills Ability to analyze and interpret results Formulate a program of wishes and demands for the redesign of a consumer food product Project.	Colloquim	25%
		Project	25%
<b>10.6. Minimal performance standard</b>			
Knowledge of 50% of the information contained in the course: Design process of consumer food products Integrated use of classical and modern technologies for food production. Knowledge of 50% of the information provided during practical work/seminars: Formulate a program of wishes and demands for the redesign of a consumer food product 100% attendance at practical work/seminars is mandatory. 50% attendance at lectures is a requirement for entry into the exam. The final grade represents the weighted average (as per section 10.3) of the ongoing assessments, practical work, and projects and must be equal to or greater than 5, as a condition for passing. Final grade = 50% CA + 25% C + 25% P			

<sup>1</sup> Level of study- to be chosen one of the following - Bachelor/Post graduate/Doctoral




<sup>2</sup> 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).



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Course regime (compulsory level) - to be chosen one of the following - **DI** (compulsory subject), **DO** (optional subject), **DFac** (facultative subject)

4 One credit is equivalent to 25 hours of study (teaching activities and individual study).

Filled in on 06.09.2024	Course coordinator Prof. Dr. Dan Vodnar 	Laboratory work/seminar coordinator Prof. Dr. Dan Vodnar 
	Subject coordinator Prof. Dr. Dan Vodnar 	
Approved by the Department on 12.09.2024	Head of the Department Prof. Dr. Ramona SUHAROSCHI	
Approved by the Faculty Council on 27.09.2024	Dean Prof. Dr. Elena MUDURA	