UNIVERSITATEA DE ŞTIINŢE AGRICOLE ŞI MEDICINĂ VETERINARĂ CLUJ-NAPOCA
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Nr._____din _____ USAMV form **0703040217**

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. Field of study	Food Engineering
1.5.Cycle of study[1]	Level 1. Bachelor
1.6. Specialization/ Study programme	**Food Engineering**
1.7. Form of education	Regular studies

2. Information on the discipline

2.1. Name of the discipline	**DESIGN OF NEW PRODUCTS**							
2.2. Course coordinator				**Associate professor PhD. Mirela Jimborean**				
2.3. Seminar/ laboratory/ project coordinator				**Assistant PhD. Delia Michiu**				
2.4. Year of study	**IV**	2.5. Semester	VIII	2.6. Type of evaluation	Exam	2.7. Discipline status	Content[2]	DS
							Compulsoriness[3]	CD

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					7
3.4.2. Additional documentation in the library, specialized electronic platforms and field					5
3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays					4
3.4.4. Tutorials					2
3.4.5. Examinations					4
3.4.6. Other activities					Hours
3.7. Total hours of individual study	22				
3.8. Total hours per semester	50				
3.9. Number of credits[4]	2				

4. Prerequisites (is applicable)

4.1. curriculum-related	Processing Technology of Animal Products, Vegetable Products Processing Technology, Packaging, Labelling and Design in Food Industry
4.2. skills-related	Identification, description and appropriate use of specific concepts of food science Understanding the Basics by-products resulting from major food technologies and direction of recovery

5. Conditions (if applicable)

5.1. for the lecture	Video, ppt presentation.
5.2. for the seminar/ laboratory/ project	Pilot Station, raw materials and auxiliary technological schemes

6. Specific competences acquired

Professional competences	C3.1. Description and use of basic concepts, theories and methods regarding technologies in the food industry C5.1. Identification of specialized terminology regarding the quality, standards and hygiene of food products in order to collaborate and cooperate with the responsible institutions in the field of food quality and safety 3-5. Development of projects related to technologies and specific products of the milk and dairy industry
Transversal competences	**CT1.** Application of strategies of perseverance, rigor, efficiency and responsibility in work, punctuality and assuming responsibility for the results of personal activities, creativity, common sense, analytical and critical thinking, problem solving etc., based on the principles, norms and values of the code of professional ethics in the food industry.

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

7.1. Overall course objective	New product development, mastery of techniques for scientific elaboration of new products Knowledge of the new product concept, mastering specific terms and interdisciplinary notions.
7.2. Specific objectives	Formation of students' creative skills Developing effective marketing skills and promoting a new product in a particular market Writing materials for institutions responsible for food quality

8. Content

8.1. LECTURE **Number of hours**	Teaching methods	Notes
The new product concept. Elements of a new product characterization. The importance and necessity of the emergence of new products in the food industry.	Lecture, heuristic conversation, explanation	2 hours
Product life cycle. Launch of new products. Market research. Consumer profile	Lecture, heuristic conversation, explanation	2 hours
The specifics of food consumption and consumer preferences to purchase and consumption. Elements of psychology in the creative process	Lecture, heuristic conversation, explanation	2 hours
The stages of a new product development. The role of research in products production demanded by the market. The cost of a new product	Lecture, heuristic conversation, explanation	4 hours
Intellectual property Institutions for patenting inventions		2 hours
Launch and promotion principles Commercial		2 hours
8.2. PRACTICAL WORK **Number of hours –**		
Stages for project realization Product concept development and testing Product design	Practical demonstration, observation Case studies. Promoting team spirit and creation concept.	4 hours
Choice of technology used in the project realization and description of the technological scheme		2 hours
Marketing planning strategies		2 hours
Observation, survey and testing of product at the level of consumer impact		2 hours
Presentation of a new product project	Presentation, discussions	4 hours

Compulsory bibliography:

1. Banu, C. şi colab., 1999, Manualul inginerului de industrie alimentară, Vol. II, Editura Tehnică, Bucuresti.
2. Banu, C şi colab.,1998, Manualul inginerului de industrie alimentară, vol. I, Editura Tehnică, Bucuresti.
3. Blyth, J., 1998 – „*Comportamentul consumatorului*", Editura Teora, Bucureşti.
4. Mirela Jimborean, 2019, Ambalarea, etichetarea şi designul în industria alimentară, Ed. Mega, Cluj-Napoca;
5. Malcomete, P., 1987 – „*Strategii de marketing"*, Editura Junimea, Iaşi.
6. Nicolescu, O., (coordonator) 1996 – „*Strategii manageriale de firmă*", Editura Economică, Bucureşti.
7. Stoica Maricica, Petru Alexe, 2016, "*Elemente de proiectare a produselor alimentare noi*". Ed. Academica, Galaţi
8. Turtoi, M., 2004 – „*Tehnici de ambalare a produselor alimentare"*, Editura Academica, Bucureşti.

9. Corroborating the course content with the expectations of the epistemic community representatives, of the professional associations and of the relevant employers in the corresponding field

Course content is consistent with national professional associations specific applications

10. Assessment

Type of activity	10.1. Assessment criteria	10.2. Assessment methods	10.3. Percentage of the final grade
10.4. Lecture	The logical, coherent and correct acquisition of the notions of new products design	Exam	25%
10.5. Seminar/Laboratory	Logical, coherence and correct application of the acquired notions	Project presentation	75%
10.6. Minimum performance standards			
Elaboration of a project related to technological processes specific in food industry. Knowledge of the main operations and brief description in the field of food industry. Writing materials for institutions responsible for food quality (flow chart).			

[1] Cycle of studies- choose of the three options: Bachelor/Master/PhD.

[2] Discipline status (content)- for the undergraduate level, choose one of the options:- **FD** (fundamental discipline), **BD** (Basic discipline), **CS** (specific disciplines-clinical sciences), **AP** (specific disciplines-animal production), **FH** (specific disciplines-food hygiene), **UO** (disciplines based on the university's options).

[3] Discipline status (compulsoriness)- choose one of the options – **CD** (compulsory discipline) **OD** (optional discipline) **ED** (elective discipline).

[4] One credit is equivalent to 25-30 hours of study (teaching activities and individual study).

Filled in on 10.09.2021

Course coordinator
Associate professor PhD Mirela Jimborean

Laboratory work/seminar coordinator
Assistant PhD. Delia Michiu

Subject coordinator
Associate professor PhD Mirela Jimborean

Approved by the Department on

Head of the Department
Professor PhD. Sevastiţa Muste

Approved by the Faculty Council on

Dean
Prof. dr. Elena Mudura