UNIVERSITATEA DE ŞTIINŢE AGRICOLE ŞI MEDICINĂ VETERINARĂ CLUJ-NAPOCA
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No._____of _____ **USAMV form CN-0709010104**

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 Science
1.4. Field of study	Food Engineering
1.5.Education level	Master
1.6.Specialization/ Study programme	Gastronomy, Nutrition and Dietetics
1.7. Form of education	Full time

2. Information on the discipline

2.1. Name of the discipline	Personalised nutrition and dietetics							
2.2. Course coordinator				Prof dr Ramona Suharoschi Assoc Prof dr Romana Vulturar				
2.3. Seminar/ laboratory/ project coordinator				Prof dr Ramona Suharoschi				
2.4. Year of study	I	2.5. Semester	**I**	2.6. Type of evaluation	Summative	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	4	out of which: 3.2. lecture	2	3.3. seminar/ laboratory/ project	2
3.4.Total number of hours in the curriculum	56	Out of which: 3.5.lecture	28	3.6.seminar/laboratory	28
Distribution of the time allotted					hours
3.4.1. Study based on book, textbook, bibliography and notes					24
3.4.2. Additional documentation in the library, specialized electronic platforms and field					25
3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays					25
3.4.4.Tutorials					10
3.4.5.Examinations					10
3.4.6. Other activities					0

3.7. Total hours of individual study	69
3.8. Total hours per semester	150
3.9. Number of credits[4]	5

4. Prerequisites (is applicable)

4.1. curriculum-related	*Human Nutrition, Food Toxicology, Food chemistry; Food Biochemistry; Food microbiology*
4.2. skills-related	The student must have knowledge of food macronutrients and micronutrients; specific, special, personalized food diets; chemical and biochemical characteristics of food compounds; operating IT; office use (excel); internet browsing; qualities of individual work and participation in carrier development pathways

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. Classroom with adequate capacity, with multimedia equipment and internet connection
5.2. for the seminar/ laboratory/ project	Research laboratory - Molecular and Proteomic Nutrition LAB, CDS3, ISV, with endowment of cell biology, cell cultures; microarray platform; internet connection; teaching materials: specialized journals, specialized books 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	**C1.1 Use of specialist knowledge for the evaluation, processing and interpretation of human nutrition data** **C3.1 - Identification and operation with the specific elements of technological, nutritional and dietary projects**
Transversal competences	CT3 Carrying out a complex, interdisciplinary scientific work

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

7.1. Overall course objective	Learning and understanding the fundamental principles of personalized nutrition and the development of these dietary applications to analyze research projects in personalized nutrition and to plan balanced meals and dietary interventions addressed / applied both to healthy people and in various pathological conditions
7.2. Specific objectives	To understand eating behaviors / food choice by families or groups of people and the contribution of feeding systems to these behaviors; To understand the distribution and causes of nutritional disparities among populations using tools of epidemiology, medical and social sciences; To be able to interpret the results of personalized nutritional studies and make recommendations for a healthy diet; To know the food, nutritional and dietary risk factors that influence health.

8. Content

8.1.LECTURE **Number of hours – 28 hrs**	Teaching methods	Notes
How to develop a PND literature project?	Lecture	2 hours
Project: Personalized nutrition: CONCEPTS AND OBJECTIVES	Lecture	2 hrs
Personalized and dietary nutrition in childhood (nutritional and dietary features of young children, preschoolers, schoolchildren, adolescents, young		5 hrs

adults, mature adults, the elderly, and metabolic programming	Lecture	5 hrs
Diet as a possible risk or preventive factor for some chronic diseases (CVD, cancer, osteoporosis, obesity / metabolic syndrome, type II diabetes) Risk / benefit biomarkers	Lecture	4hrs
Personalized nutritional interventions (personalized diets)	Lecture	2 hrs
EU and international research projects in the field of personalized nutrition	Lecturer	8 hrs
Student projects		

8.2. PRACTICAL WORK **Number of hours – 28 hrs**	Theoretical presentation of practical works (Working in group teams on the project: literature review PND)	1 lab work (2 hours / work) 2 hours
Identification of the problem to be solved (case study: NP elderly people, with associated diseases, children, sports, etc.)	Case study	
Activity: nutritional compounds, fundamental understanding of food composition		2 hours 2 hours
(7 days) diet analysis	Case study	2 hours
Nutritional Goal Setting (SMART)		
Healthy nutrition for the present and for the future!	Case study	
Nutrient loading of the diet (analysis of nutrients consumed), foods that increase immunity, energy, intended for well-being and good mood, for daily stress management.	Case study	4 hours 4 hours
Discussion / Debate Diet Analysis (7-days)	Case study	4 hours
Analysis of the combination of mineral vitamins consumed	Case study	
Analysis of nutritional weaknesses	Case study	
Application - management / marketing - in the conditions of personalized nutrition - at a supermarket, advertising / promotion schemes, strategies for buying healthy / cheap food (affordable)	Case study	4 hours 4 hours
Seasonal food choices	Case study	
Personalized Nutritional Plan (intervention)	Case study	
Students will design (healthy nutritional design) a week of personalized nutrition and will support the strengths / and justifications of the personalized nutritional plan presented	Project	

Compulsory bibliography:

Food & Nutrition & Dietetics Journals (MDPI, PubMed, Science Direct)
Cochrane
EMBASE

1. Valoarea nutritiva a produselor agroalimentare, R Segal, B Segal, 1983;
2. Socaciu Carmen, Curs de chimie alimentara si aditivi alimentari, Cluj-Napoca, 1997.
3. Brad Segal, Constanta Balint, Procedee de imbunatatire a calitatii si stabilitatii produselor alimentare, Ed. Tehnica, Bucuresti, 1982.

Mincu, I., 1978, Alimentatia ratională a omului sănătos.Ed. Medicală, Bucuresti
5. Mincu, I., Segal, B., Elena Popa, Rodica Segal, 1989, Orientări actuale în nutritie. Ed. Medicală, Bucuresti
6. Gontea, I., 1971, Alimentatia ratională a omului. Ed. Didactică si Pedagogică, Bucuresti
7.Suharoschi R, Principiile nutrutiei umane, Ed AcademicPres, 2013

Optional bibliography:
1.Journal of Nutrition Education
2Nutrition
3.Journal of Nutrition
4. Nutrition Research

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 knowledge taught in the course is necessary to know and understand the role of healthy eating and nutrition based on the principles of personalized nutrition in health care and the role of the food industry specialist in developing safe, attractive foods and exploiting the relationship between health and nutrition.

10. Assessment

Type of activity	10.1. Assessment criteria	10.2. Assessment methods	10.3. Percentage of the final grade
10.4. Lecture	Course debates on specific topic	continuous	35%
10.5. Seminar/Laboratory	Research volunteers, poster presentation, manuscript review - Talks, posters, manuscripts review	Theoretical and practical skills	5%
10.6. Minimum performance standards			
Publication of min. 1 scientific article in a specialized journal or participation in min. 1 conference / symposium			

[1] Education levels- choose of the three options: Bachelor/ * Master/Ph.D.
[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).
[5 / *] Disciplines: AK- Advanced knowledge, CT- Complementary Training, S- Synthesis

Titular lucrari laborator/seminarii

Sef lucr dr Oana Lelia Pop

Titular curs

Prof dr Ramona Suharoschi

Data completării

14.09.2021

Prof dr Ramona Suharoschi

Conf dr Romana Vulturar

Coordonator disciplină

Prof dr Ramona Suharoschi

Data avizării în departament

22.09.2021

Director de departament

Prof dr Ramona Suharoschi

Data avizării în Consiliul Facultății

28.09.2021

Decan

Prof dr Eelena Mudura