

Course Unit Descriptor

Study Programme: Food Engineering			
Course Unit Title: Technology of Protein Dairy Products			
Course Unit Code: DPI24			
Name of Lecturer(s): Full Professor Mirela Iličić, Associate Professor Katarina Kanurić			
Type and Level of Studies: Doctoral Academic Degree			
Course Status (compulsory/elective): Elective			
Semester (winter/summer): Winter			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face-to face			
Number of ECTS Allocated: 10			
Prerequisites: None			
Course Aims: Students of doctoral studies are trained to introduce innovations, advanced operations and processes in the field of proteins dairy technology.			
Learning Outcomes: The objective of this course is the introduction of students with modern scientific and practical achievements in the field of modern trends in the technology of proteins dairy products.			
Syllabus: Milk protein - composition and properties: casein and whey proteins. Physico-chemical and functional properties of casein and whey protein. Fermented, concentrated and dried products from skimmed milk, whey and buttermilk. Membrane filtration. Chemical and enzymatic modifications milk protein. Application of casein, caseinate and whey protein concentrate. Protein dairy products as ingredients/additives in food. Biological potential and health significance of protein dairy products. Functional properties and health significance of selected proteins dairy products – biologically active components, antioxidant potential. Sensory properties. Monitoring the process. Techno-economic analysis of the process of selected protein dairy products. <i>Practice</i> Search, processing, analysis and discussion of achievements in scientific and technical literature in the field of proteins dairy technology. Selection and processing of data and preparation of seminar.			
Required Reading: 1. Carić, M., Milanović, S. Mleko u prahu i srodni proizvodi, 2016. 2. Carić, M. : Concentrated and Dried Dairy Products, VCH Publishers, 1994. 3. Tamime A.Y.: Dairy Powders and Concentrated Products, Wiley- Blackwell, 2009.			
Weekly Contact Hours:	Lectures: 4	Practical work: 2	
Teaching Methods: Lectures and students group work.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points

Active class participation	5	written exam	
Practical work	10	oral exam	50
Preliminary exam(s)	25	
Seminar(s)	10		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			