

(Table 5.2) Course unit description

Study program: Chemistry				
Type and level of studies: Doctoral academic studies in Chemistry				
Course unit: Biochemistry of food and nutrition				
Teacher in charge: Vladimir Mihailović, PhD, Assistant Professor				
Language of instruction: English				
ECTS: 10				
Prerequisites: Students should be enrolled in the doctoral academic studies in Chemistry				
Semester: Optional (Winter or Summer semester)				
Course unit objective Defining the basic concepts of nutrition. Introduction with chemical composition of food, macro- and micro-constituents contents, their energetic values and potential to supply nutritional and energetic needs of people. Understanding the metabolic transformation. Introduction with modern tendencies in food research, which aimed to prevent and control diseases caused by food.				
Learning outcomes of Course unit Students should be competent to apply acquired knowledge and carry out the independent work in the field of food biochemistry and nutrition in further research, modern technologies and practice.				
Course unit contents <i>Theoretical classes:</i> Introduction (about food and nutrition). Basic principles of nutrition planning. Estimation the calorific value of food. Basal metabolism. Principles of daily nutrition. Nutrition during the life cycle. Functional food and nutraceuticals. Additives in food (definition, health aspects, classification, preservatives, aromas and flavor modifiers). Nutritive allergens. Biochemical transformations during processing, storage and preservation of food. Toxic substances in food (natural, toxic substances formed during food processing, toxic chemical substances of microbiological origin, heavy metals and other contaminants). The importance of proper nutrition in prevention and treatment of diseases. <i>Practical classes:</i> /				
Literature 1. Belitz, H. D., Grosch, W., Schieberle, P. <i>Food Chemistry</i> , 3rd Ed., Springer, Berlin 2004. 2. Thompson, J.L. , Manore, M.M., Vaughan, L.A., <i>The science of nutrition</i> , 2nd Edition, Pearson Education, Inc., 2011. 3. Gropper, S.S., Smith, J.L., <i>Advanced Nutrition and Human Metabolism</i> , 6th Edition, Cengage Learning, 2013.				
Number of active teaching hours				Other classes:
Lectures:5	Practice: 0	Other forms of classes:	Independent work:	
Teaching methods				
Examination methods (maximum 100 points)				
Exam prerequisites	No. of points	Final exam	No. of points	
Practical classes	/	Written examination	20	
Tests	/	Oral examination	30	
Homework	/	Other	/	

Seminars	20		
Project	30		
Grading system			
Grade	No. of points	Description	
10	>= 91	Excellent	
9	81-90	Exceptionally good	
8	71-80	Very good	
7	61-70	Good	
6	51-60	Passing	
5	<=50	Failing	