

Study programme: General Agronomy				
Type and level of study: Bachelor's degree (240 ECTS) – First cycle				
Course title: Biochemistry				
Lecturer: Full Professor Pavle Mašković, PhD				
Language of instruction: English				
ECTS credits: 6				
Prerequisite:				
Semester: <i>winter</i>				
Course objective Introducing students with: - physical-chemical structure and the role of cells and cellular organelles; - function of enzymes, coenzyme, vitamins and hormones in metabolic processes; - biosynthesis, transformation and degradation of carbohydrates, lipids and proteins.				
Learning outcomes Acquired knowledge in biochemistry is the basis for understanding other scientific disciplines (physiology, genetics, microbiology, etc.). These theoretical knowledge should be of great use in technology in the production of healthy food of plant and animal origin.				
Course contents <i>Theoretical instruction</i> Biochemical role of cells and cellular organelles; High-energy compounds; Kinetics and energy of biochemical processes; Biocatalysts (enzymes, vitamins, hormones); Coenzyme function, Metabolism of carbohydrates, lipid metabolism, metabolism of nitrogen compounds. <i>Practical instruction</i> Analysis: free and complex carbohydrates, lipids and proteins. Investigation of the influence of certain parameters on enzyme activity; Proving vitamins, hormones, chlorophyll and hemoglobin; Determination of water and ash in plant and animal products. Analysis of individual food quality parameters.				
Recommended reading Harper's Illustrated Biochemistry by Robert K. Murray, Darryl K. Granner, Peter A. Mayes. (2013): Fundamentals of Biochemistry: Life at the Molecular Level by Donald Voet, Judith G. Voet, Charlotte W. Pratt (2005): Vitamins, Herbs, Minerals, & Supplements by H. Winter Griffith. (2000).				
Hours of active teaching				Other classes
Lectures:	Practicals: 2x15=30	Other forms of teaching Tutorials 3x15=45	Individual work:	
Teaching methods Theory teaching: lectures ex catedra Practical classes: experimental exercises				
Assessment (maximum points 100)				
Examination requirements	Points	Final examination		Points
Class participation	5	oral examination		55
Practical sessions/tests	10	written examination		
Term paper assignments/homework	30		
Project				
Other				
Grading system				
Grade	ECTS		Description	
10	91-100		Excellent	
9	81-90		Exceptionally good	
8	71-80		Very good	
7	61-70		Good	
6	51-60		Passing	
5	≤50		Failing	