Information sheet for the course
Biochemistry

University: *Alexander Dubček University of Trenčín*	
Faculty: *Faculty of Health Care*	
Course unit code: Bioch/e	**Course unit title:** Biochemistry
Type of course unit: *compulsory*	
Planned types, learning activities and teaching methods: *Lecture: 2 hours weekly/26 hours per semester of study; full-time*	
Number of credits: 3	
Recommended semester: *2nd semester in the 1st year (part-time)*	
Degree of study: *I (bachelor)*	
Course prerequisites: *none*	
Assessment methods: Written or oral examination (50 score points) - for obtaining the particular grades it is necessary to achieve: at least 45 score points for the grade A at least 40 score points for the grade B at least 35 score points for the grade C at least 30 score points for the grade D at least 25 score points for the grade E	
Learning outcomes of the course unit: The student will acquire knowledge by studying the subject of basic concepts and theoretical principles biochemistry in relation to the physico-chemical properties of essential biomolecules and the relationship of their structure and biological activity. The student will acquire knowledge by studying the principles of biochemical processes in the metabolism of nutrients and mechanisms of regulation of these processes at the cellular and organisms' level.	
Course contents: 1. Introduction to Biochemistry. 2. Carbohydrates. Lipids. 3. Biomembranes - red blood cells, blood groups, ion channels. 4. Cholesterol, phytosterols. 5. Amino Acids. Proteins. 6. Fibrillar proteins (α-keratin, fibroin, collagen, elastin). Globular proteins (hemoglobin, myoglobin). 7. Enzymes. Vitamins. Nucleic acids. 8. Metabolic pathways, ATP. 9. Glycolysis. Gluconeogenesis. 10. The citric acid cycle. Oxidative phosphorylation. Electron Transport Chain. 11. Lipid metabolism. 12. Metabolism of amino acids. Protein synthesis. 13. Metabolism of nucleotides.	
Recommended of required reading: 1. ZAHRADNÍK, P., KOLLÁROVÁ, M.: 1997. *Prehľad chémie 2, Organická chémia a biochémia. Bratislava: S*PN, 1997. 325 p. ISBN 80-08-01005-3 2. VOET, D. 1990. *Biochemie. Praha :* Victoria Publishing, 1990. 1325 p. ISBN 80-85605-44-9.	
Language: Slovak	
Remarks: -	

Evaluation history: *Number of evaluated students* -					
A	B	C	D	E	FX
-	-	-	-	-	-
Lectures: RNDr. Zdenka Krajčovičová, PhD.					
Last modification: 22.04.2014					
Supervisor: doc. MUDr. Mária Štefkovičová, PhD., MPH.					