

STUDY PROGRAMME	CHEMICAL ANALYSIS, 653F18001
SUBJECT TITLE	Biochemistry
NUMBER OF CREDITS	3
DURATION OF SUBJECT	Total: 80 hours (48 contact hours, 32 self-study hours)
TEACHING PERIOD	Spring Semester
SUBJECT CONTENT	<p>Subject objective Provide students with the knowledge and skills necessary to apply general regularities of chemistry and describe the composition, properties and changes of substances constituting living organisms, form researcher skills, collect information about the composition of living systems and operating principles, and develop professional competences of a qualified chemistry specialist.</p> <p>Learning outcomes Be able to: describe the object, concepts and general patterns of biochemistry, create a compound name using the IUPAC nomenclature system; describe the composition and structure of main biological polymers synthesized in the body; identify bioorganic compounds which are functionally important for living organisms; apply theoretical biochemical knowledge for the validation of analysis methods; define functions of biologically active polymers; explain operating mechanisms of biologically active compounds; describe properties of bioorganic compounds which determine fractionation and separation possibilities.</p> <p>Content (topics)</p> <ol style="list-style-type: none"> 1. The object of biochemistry, research areas and objectives. Water in biological systems. Energy of living systems 2. The structure and biological function of nucleic acid 3. The structure and biological function of protein 4. Specific functions of protein 5. Classification of enzymes. Kinetics of enzymatic reactions 6. Enzymes modifying nucleic acids 7. The structure, distribution and function of hydrocarbons. Lipids: composition and functions
ASSESSMENT	Cumulative assessment (intermediate settlements, laboratory work, self-study, examination)
SUBJECT COORDINATOR	Asta Jokubauskaitė Vilniaus kolegija/University of Applied Sciences, Faculty of Agrotechnologies, Chemistry Department 2A Beržų str., Buivydiškės, Vilnius district, LT-14160, Lithuania Tel. +370 5 2 19 16 59 E-mail: chemija@atf.viko.lt