Course unit title	BASICS OF BIOCHEMISTRY, IMMUNOLOGY AND GENETICS
Course unit code	BH(SK)/2-2
Type of course unit	Compulsory
Level of course unit	First cycle
Year of study (if applicable)	First year
Semester/	Spring semester
Number of ECTS credits allocated	3 ECTS
Learning outcomes of the course unit	**Upon completion of the course unit, students will be able to:** LO1. Explain biochemical processes in the human body, particularly in the oral cavity and teeth, and identify risk factors for inherited diseases. LO2. Apply ethical principles in genetic counselling and discuss ethical issues in genetics. LO3. Analyse the effects of biologically active substances and factors influencing oral health. LO4. Explain inheritance patterns, inherited diseases and their impact on health.
Mode of delivery	Blended learning
Prerequisites and co-requisites	Anatomy, Physiology and Pathology.
Course contents	Fundamentals of biochemistry and immunology. Biologically active substances and their effects on the human body. Metabolism of carbohydrates, lipids, proteins and nucleic acids. Metabolic disorders and their impact on health. Biochemistry of bone tissue, teeth and saliva. Dental plaque formation, demineralisation and remineralisation processes. Infectious immunology and antigen–antibody interactions. Human genes, genome and karyotype. Inherited diseases, genetic diagnostics and gene therapy. Embryonic and postnatal development. Prenatal diagnostic methods. Medical genetic counselling and ethical issues in genetics.
Planned learning activities and teaching methods	Lectures, practical classes, case analysis, discussions, independent study.
Assessment	Continuous assessment and final examination. Assessment methods: practical assignments, tests, case analysis, presentations and final examination. Final grade: Continuous assessment (50%) and final examination (50%).
Language of instruction.	English
Work placement(s)	Utenos kolegija Higher Education Institution Faculty of Medicine