

Course unit title	BASICS OF BIOCHEMISTRY, IMUNOLOGY AND GENETICS
Course unit code	OP(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	<p>Upon completion of the course unit, students will be able to:</p> <p>LO1. Evaluate biochemical processes in the human body, particularly in the oral cavity and teeth, and identify the causes and risk factors of hereditary diseases.</p> <p>LO2. Identify factors ensuring oral health by analysing the effects of biologically active substances on the human body and understanding the methods and practical applications of modern biochemistry in dentistry.</p> <p>LO3. Explain hereditary diseases and assess their risk factors, inheritance patterns and the impact of harmful habits on health.</p> <p>LO4. Apply the principles of professional ethics in relation to the importance of medical genetic counselling and the main ethical issues in genetics.</p>
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. Chemical composition of hard dental tissues: mineral and organic substances. Infectious immunology and seroprophylaxis. Human genes and genome. Human karyotype and chromosomes. Progenesis, embryogenesis and postembryonic human development. Hereditary diseases and their diagnostics. Gene therapy. Medical genetic counselling and ethical issues in genetics.
Planned learning activities and teaching methods	Interactive lectures, presentation of viewpoints, work with textbooks, practical training, concept mapping, hypothesis development and justification, testing, case analysis, question-and-answer sessions, group discussions, report presentations and experiential learning activities.
Assessment	Examination – 50% Feedback assessment – 10% Continuous assessment – 40%
Language of instruction.	English
Work placement(s)	Utenos kolegija Higher Education Institution Faculty of Medicine