

Degree level: Bachelor				
Course Title: Basic Microbiology				
Course status: Required				
ECTS: 6				
Requirements: none				
Course Objective: The aim of the course is to enable students to understand fundamentals of morphology, genetics, physiology, growth, taxonomy, pathogenicity, ecology and application of microorganisms, with special emphasis on prokaryotes. The acquired knowledge should be the basis for other required and/or elective courses in the field of microbiology.				
Course Outcome: Students will be able to describe various characteristics of microorganisms and their significance, as well as to carry out basic microbiological analysis. The course should provide knowledge important for other courses in microbiology.				
Course Content: <i>Theoretical part</i> Introduction to microbiology and historical path of its development as a science. Short repetition of biology of acellular (viruses and subviral particles) and cellular microorganisms with particular attention to prokaryotes. Nutrition and growth of microorganisms. Cultivation of microorganisms. The metabolic diversity of microorganisms. Genetics of microorganisms. Taxonomy of microorganisms. Pathogenicity of microorganisms. Microbial Ecology. Biotechnological application of microorganisms. <i>Practical part</i> Microbiological laboratory. Microscope and microscopy. Native and fixed preparations. The morphology of bacteria. Culture medium and cultivation. Sampling for microbiological analysis. Direct and indirect methods for bacterial number determination. Biochemical properties of bacteria.				
Total hours:				
Lectures: 3	Practicals:	Other: 2	Student research work:	