

Study Programme : BSc in Biology			
Degree level: Bachelor degree			
Course Title: Basic Microbiology			
Professor: Petar Knezevic, Maja Karaman			
Required/Elective Course: Required			
Number of ECTS: 6			
Prerequisites:			
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 a 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 repetitoria 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.			
Reading List: 1. Petrović O., Knežević P., Simeunović J. (2007) : Mikrobiologija. Skripta – WUS Austrija, Novi Sad 2. Jarak, M., Govedarica, M. (2005): Mikrobiologija. Poljoprivredni fakultet, Novi Sad 3. Madigan, M. T., Martinko, J. M. (2006): Brock Biology of Microorganisms. 11th ed. Pearson Education, Inc.			
Total hours:			
Lectures: 3	Practicals:	Other: 2	Student research work:
Methods of instruction: Lectures with using PowerPoint presentations; Practice- individual student work and demonstration of some bacteriological methods			
Assessment (maximum number of points 100)			
Requirements	points	Final exam	points
Active participation in lectures	5	Practical exam	20
Active participation in practicals	40	Oral exam	20
Test(s) or	15		
Pre-exam testing			