

Study Programme : BSc in Biology			
Degree level: Bachelor degree			
Course Title: Virology			
Professor: Petar Knezevic			
Required/Elective Course: Elective			
Number of ECTS: 6			
Prerequisites:			
Course Objective: The aim of the course is to familiarize students with specificity of structure and multiplication of acellular microorganisms, their importance, as well as with representatives of bacterial, plant and animal viruses.			
Course Outcome: Students will be able to describe structure and multiplication of viruses and to distinguish representatives of viruses of microorganisms, plants, animals and humans. They will also be able to understand the consequences of virus infection on the cell and organism level, distribution, and transmission of the virus, as well as methods of controlling them.			
Course Content: <i>Theoretical part</i> The development of virology as a biological discipline. Structure and general characteristics of the virus. Adhesion and entry of virus into a cell. Multiplication, genetics and variability of viruses. Maturation and release of virus from cell. Classification and nomenclature of viruses. Representative families of microbial. Representative families of plant viruses. Representative families of viruses of insects and other organisms. Representative families of animal and human viruses. Types of viral infections and the effect of the virus at the level of organism; oncogenic potential of viruses. Transmission and ecology of virus. Antiviral drugs and vaccines. Subviral particles. The origin and evolution of viruses. <i>Practical part</i> The study of transmission electronic micrograph of the virus. Methods for characterization of the viral genome. SDS-PAGE of viral proteins. Methods of determining the number of viruses. One step growth curve. Isolation and multiplication of animal viruses. Purification of the virus. Virus resistance to physical and chemical agents. Methods for virus detection-fluorescence microscopy, immuno enzymatic methods, serological and molecular methods.			
Reading List: <ol style="list-style-type: none"> 1. Vera Jerant Patić (2007) <i>Virusologija</i>, Ortomedics, Novi Sad. 2. Carter, J., Saunders, V (2007): <i>Virology principles and applications</i>. John Willey & Sons Ltd. UK 3. Alan J. Cann (2005): <i>Principles of Molecular Virology</i> (Standard Edition), Academic Press 			
Total hours:			
Lectures: 2	Practicals:	Other: 2	Student research work:
Methods of instruction: Lectures with using PowerPoint presentations; Practice- individual student work and demonstration of some methods used in virology			
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			