

Study programme: BSc in Biology			
Level: bachelor degree			
Course title: BASIC MOLECULAR AND CELLULAR IMMUNOLOGY			
Lecturers: Prof. Dr Tatjana Kostic, Prof. Dr Silvana Andric			
Status: Obligatory			
ECTS: 5			
Requirements: -			
Learning objectives Objective of this course is to study the fundamental mechanisms of immune system on the molecular and cellular level.			
Learning outcomes At the end of this course students will be able to understand and describe the basic mechanisms of the immune system functions on molecular and cellular level, as well as to acquire ability to understand the scientific hypothesis and experimental results in immunological investigations.			
Syllabus <i>Theoretical instruction</i> Functional organization of the immune system. Recognition of antigens. Maturation, activation and regulation of lymphocytes. Effective mechanisms of the innate and adaptive immune response. Immune system in disease (immune response against tumors and against diseases which are caused by immune response). <i>Practical instruction</i> Isolation and cultivation of the lymphocytes. Immunization. Determination of the ABO-Rh blood groups. Quantitative analysis of antigens. Antigen detection in cells and tissues. Work on the short scientific project in the field of molecular and cellular immunology.			
Recommended Literature: Kostic T & Andric S (2007): <i>Molecular and Cellular Immunology (script)</i> . WUS Austria. Abbas AK & Lichtman AH (2007): <i>Basic Immunology</i> . WB Saunders Company. Wood P (2006): <i>Understanding Immunology 2ed</i> . Pearson Prentice Hall. Mahon RC & Tice D (2006): <i>Clinical Laboratory Immunology</i> . Pearson Prentice Hall. Janeway CA, Travers P, Walport M, Shlomchik MJ (2005): <i>Immunobiology 6ed: The Immune System in Health and Disease with CD-ROM</i> . Churchill Livingstone. Paul EW (2003): <i>Fundamental Immunology</i> . Lipincott Williams & Wilkins Sompayrac L (2003): <i>How the Immune System Works</i> . Blackwell Publishing. Rott IM & Delves PJ (2001): <i>Essential Immunology</i> . Blackwell Publishing.			
Weekly teaching load			Other:
Lectures: 2	Exercises:	Other forms of teaching: 2	Student research: 1
Teaching methodology Theoretical part - Lectures Practical part – Combination of laboratory work and computer simulations Seminars - Short presentation of the specified topics			
Grading method (total number of points 100)			
Pre-exam obligations	points	Final exam	points
Practical problems	up to 40	Oral exam	up to 20
Tests	up to 40		