

Study programme: PhD in Biology				
Level: Doctoral degree				
Course title: Biochemical markers of diseases				
Lecturer: dr Željko Popović, dr Danijela Kojić				
Status: elective				
ECTS: 15				
Requirements:				
Learning objectives				
The aim of this course is to introduce the students with the basics of molecular medicine, biochemical markers of diseases as well as molecular mechanisms and etiology of the most common disorders.				
Learning outcomes				
Students should be able to understand the molecular basis of disfunctions of various organs, importance of the use of biomarkers for diagnosis of disease as well as monitoring and prognosis during treatment				
Syllabus				
<i>Theoretical instruction</i>				
Lectures will cover following topics: Introduction to molecular medicine. Biomarkers of cardiovascular, hematologic, immunological, pulmonary, gastroenterological and neurological disease and dysfunction. Molecular mechanisms and biochemical markers in cancer, AIDS, viral and bacterial infections. Biochemical methods and molecular biology techniques in clinical biochemistry. Biomarkers in transplantation and toxicology.				
<i>Practical instruction</i>				
Student research paper with application in the field of molecular medicine, cancer research, pharmacy, toxicology.				
Literature				
Trull A.K., Price C., Demers L. (2002): Biomarkers of diseases, Cambridge University Press Auxiliary literature:				
Weekly teaching load				Other:
Lectures:	Exercises:	Other forms of teaching:	Student research:	
Teaching methodology				
Grading method (maximal number of points 100)				
Oral exam	50			
Student's research	50			