

<b>Course code</b>	<b>BUM102</b>		
<b>Course title</b>	<b>NANOMEDICINE</b>		
<b>General Info</b>			
Study programme	Graduate study „, Biotechnology in medicine“	Academic year	
Lecturer	Prof. Dr. Sc. Krešimir Pavelić		
Status kolegija		<b>Required</b>	
ECTS system			
<b>Course Objectives</b>			
Introducing the students to basic principles of nanomedicine and their applications in clinical medicine, especially diagnostics and treatment.			
<b>Course Description</b>			
<p>Basic frame of the course</p> <p>Nanomedicine is the term that stands for the application of nanotechnology in health sciences. This technique uses established as well as novel physical, chemical, and biological properties of materials on nano- or even fento- scale.</p> <p>General contents of the course entail:</p> <ul style="list-style-type: none"> <li>- preventive medicine</li> <li>- the role of nanomedicine in health care</li> <li>- diagnostics</li> <li>- treatment</li> <li>- monitoring the outcome of various diseases (cardiovascular diseases, cancer, diabetes)</li> </ul> <p>The course will cover general applications of nanotechnology in diagnostics and imaging as well as applications of nanotechnology in targeted drug delivery. Furthermore, it will cover the basics of nanotechnology in regenerative medicine (smart biomaterials and tissue implants, bioactive signaling molecules, cell therapy), bioactive signaling molecules, and ethical and social aspects of nanomedicine. The topics will also include discussions about nanomedicine and public opinion, risk assessment in nanotechnology, legal regulations and intellectual property rights.</p>			
<b>Learning Outcomes</b>			
Upon the completion of the course the students will gain a comprehensive understanding of terms used in nanomedicine as well as knowledge of implementations of nanomedicine and nanotechnological solutions in modern medicine.			