

<b>Name of the Lecture</b>	Introduction of Biomaterials and Tissue Engineering
<b>Level of the Lecture</b>	Graduate
<b>Length of the Lecture</b>	25 minutes
<b>Type of the Lecture</b>	Online
<b>Lecturer</b>	Prof. Dr. Ovidiu Oprea
<b>Lecturer Email</b>	<a href="mailto:ovidiu.oprea@upb.ro">ovidiu.oprea@upb.ro</a>
<b>Aim of the Lecture</b>	The lecture is intended to make a general introduction in the topic from a holistic point of view.
<b>Content of the lecture</b>	<p>The lecture will be focused on:</p> <ul style="list-style-type: none"> <li>• Short introduction related to materials;</li> <li>• Classification of biomaterials according to several criteria (size, nature, composition, etc.);</li> <li>• Role of biomaterials in tissue engineering;</li> <li>• Materials design and fabrication;</li> <li>• Role of (nano)structuration: multifactorial correlation of chemical composition – size and shape – properties – performances;</li> <li>• Biomimetism in development of biomaterials for tissue engineering.</li> </ul>
<b>Recommended Sources</b>	<ul style="list-style-type: none"> <li>• Krishnan, Uma Maheswari, Sethuraman, Swaminathan, Subramanian, Anuradha; Biomaterials and nanotechnology for tissue engineering; CRC Press - Taylor &amp; Francis Group; 2017; ISBN: 9781498743730; 352pg</li> <li>• Kanika Chawla; Biomaterials for Tissue Engineering; Springer New York; Humana Press, 2018; ISBN: 9781493977413; 220pg</li> </ul>
<b>Language of the lecture</b>	English
<b>Learning Outputs</b>	To use the adequate language in the field of biomaterials and tissue engineering;
	To know the most important characteristics necessary for materials to be considered biomaterials;
	To correctly assess the materials from the point of view of their use in medical applications;
	To realize the importance of nature and microstructuration in tissue engineering;