

<b>Level:</b> bachelor				
<b>Course title:</b> Information Technologies in Biomedicine				
<b>Status:</b> elective				
<b>ECTS:</b> 6				
<b>Requirements:</b> none				
<b>Learning objectives</b> To qualify students for understanding the basic concepts and the applications of information technologies in biomedicine.				
<b>Learning outcomes</b> The overall competence is acquiring knowledge and students' ability for individual and team scientific research work in the field of biomedical informatics, more specific: <ul style="list-style-type: none"> <li>• Understanding of the basic concepts of biomedical signal and image acquisition</li> <li>• Understanding of data archiving and retrieving</li> </ul> The use of modern computer tools for data management.				
<b>Syllabus</b> <i>Theoretical instruction</i> <ul style="list-style-type: none"> <li>• Introduction to information technologies;</li> <li>• Data acquisition, discretization, quantization and digitizing;</li> <li>• Digital signal processing basics;</li> <li>• Medical image analysis and processing;</li> <li>• Data compression, storage and transfer;</li> <li>• Standards in biomedical informatics;</li> <li>• Management with large datasets. Data retrieval;</li> <li>• Multimedial data processing and management in biomedicine.</li> </ul> <i>Practical instruction</i>				
<b>Weekly teaching load</b>				Other:
Lectures: 3	Exercises: 1	Other forms of teaching:	Student research: 1	