

<b>General Information</b>			
<b>Course name and code</b>	<b>Molecular Biology ÚBEV/MOB1/15</b>	<b>ECTS Credits</b>	<b>7</b>
		<b>Semester</b>	<b>2nd (Summer) Bachelor Degree</b>
<b>Aims</b>			
<p>Familiarizing students with the structure, properties and function of information macromolecules and their work, focusing primarily on the molecular mechanisms that regulate DNA replication, gene expression and cell cycle.</p>			
<b>Contents</b>			
<p>The structure and properties of information macromolecules. The molecular structure of chromatin and mitotic and meiotic chromosome. The dynamics of chromosomes. Replication of chromosomal and extrachromosomal DNA. Repair of DNA damage. The genome of prokaryotes and eukaryotes. The human genome. Mobile genetic elements. Transcription and posttranscriptional modifications. Translation and posttranslational modifications. Specific protein degradation. The interaction of DNA with proteins. Regulation of expression of prokaryotic and eukaryotic genes. Control of the cell cycle. Apoptosis.</p>			
<b>Evaluation</b>			
<p>Oral examination.</p>			
<b>Bibliography</b>			
<p>B. Alberts, D. Bray, J. Lewis a kol.: Molecular Biology of the Cell, Academic Press, London, 1994 D.P. Clark: Molecular Biology, Elsevier Academic Press, London, 2005</p>			