

General Information			
Course name and code	Molecular Biology ÚBEV/MOB1/15	ECTS Credits	7
		Semester	2nd (Summer) Bachelor Degree
Aims			
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.			
Contents			
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.			
Assessment Methods and Criteria			
Oral examination.			
Grading Scale (in %): A ... 100 - 91%, B ... 90 - 81%, C ... 80 - 71%, D ... 70 - 61%, E ... 60 - 51%, Fx ... < 51%			
Grading System: The University recognises the following six degrees for the evaluation of the study results:			
a) A – excellent (excellent results) (numerical value 1)			
b) B – very good (above average results) (1.5)			
c) C – good (average results) (2)			
d) D – satisfactory (acceptable results) (2.5)			
e) E – sufficient (results meet the minimum criteria) (3)			
f) FX –failed (requires further work) (4)			
Bibliography			
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			