

Title	Basic methods in genetic engineering		
Code	3MN24NAK16M		
Prerequisites	Molecular genetics (MSc)		
Description	The course aims at surveying biochemical and genetic knowledge necessary for understanding and doing genetic engineering experiments. Students will learn about the following subject areas: Concept and history of gene technology, Tools of genetic manipulation, cloning, Making of recombinant DNA, host organisms and their transformation, Separation and hybridization techniques, Methods of mutagenesis, PCR applications, Transcriptome analysis, Conventional and new generation methods of sequencing, Building and screening of gene libraries, Using databases for the purposes of gene technology, The place and role of recombinant nucleic acid technologies in nowadays plant biotechnology.		
Lecturer	Dr István Papp, professor, Kissné Dr. Erzsébet Bába PhD, assistant professor, Dr. Anita Szegő PhD, assistant professor		
Semester	2nd, spring	Contact hours/week	1+2
Level	MSc	ECTS	3
Teaching and Learning Methods:			
Reading:	<p>Compulsory literature:</p> <ul style="list-style-type: none"> - online teaching material available through the e-learning system of SZIU - Nicholl, Introduction to genetic engineering Cambridge Univ Press 3rd ed. 2008 <p>Recommended literature:</p> <ul style="list-style-type: none"> - Eds Krebs et al, Lewin's Genes XII Jones and Bartlett 2017 		
Assessment:	exam		