

<b>University:</b> University of Presov in Presov					
<b>Faculty:</b> Faculty of Humanities and Natural Sciences					
<b>Subject code:</b> 2BIO/EROSJGENE/22			<b>Subject name:</b> Genetics		
<b>Method of educational activities:</b> lecture/excercise					
<b>Number of ects:</b> 5					
<b>Semester:</b> winter					
<b>Degree of study:</b> bachelor					
<b>Evaluation:</b> Semestral work, written exam of genetic terminology, solution of examples from genetics (40 %) Exam (60 %)					
<b>Education outcomes:</b> Obtain knowledge from general and clinical genetics, acquire genetic terminology. To master the symptomatology of selected mutations, types of inheritance, basics of cytogenetics, population genetics and methods of genetic analysis.					
<b>Syllabus:</b> Genetics - the object of investigation, basic stages of genetics development, the basics of genetic terminology, the role of the cell in the transmission of genetic information, the patterns of cell division. Genetic code. Fundamentals of regulation of genetic systems. Chromosome theory of inheritance. Genetic determination of gender. Fundamentals of developmental Genetics. Extraterrestrial heritage. Cytogenetics-basic concepts, methods, international chromosome nomenclature. Inheritance and environment, mutations. Fundamentals of immunogenetics. Population genetics. Population genetics of qualitative and quantitative features. Genetic correlation and selection indices. Calculation of genetic risk for the population and the individual, composition of genealogy, determination of genetic prognosis. Genetics of enzymopathies. Modern trends in genetics, gene mapping, gene manipulation, DNA analysis, cloning. Prenatal diagnosis of genetic pathological conditions, genetic counseling.					
<b>Literature:</b> Elrod, S., Stansfield, W., 2010. Genetics. McGrawHill. ISBN 978-0-07-162503-6. 413pp. Nussbaum, R.L., McInnes, R.R., Willard, H. F., Hamosh, A. Genetics in Medicine. 7th Edition. SAUNDERS, Elsevier, ISBN 978-1-4160-3080-5.585pp. Speicher, M.R., Antonarakis, S.E., Motulsky, A.G. Vogel Motulsky´s Human Genetics. Problems and Approaches. Springer. ISBN 978-3-540-37653-8. 981pp. Gardner, A., Davies, T. Human Genetics. Scion Publishing Ltd. ISBN 978-1-904842-73-6. 328pp.					
<b>Language:</b> english					
<b>Evaluation of subject:</b>					
A	B	C	D	E	FX
<b>Teacher:</b> prof. MVDr. Janka Poráčová, PhD., MBA					
<b>Date of last change:</b> 28.08.2020					