

Subject card

Subject name and code	Basics of human genetics, PG_00203342						
Field of study	Medical Biology						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2028/2029		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		2.0		
Learning profile	academic		Assessment form		exam		
Conducting unit	Laboratory of Human Genomics and Genetics -> Department of Medical Biology and Genetics -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Anna Kloska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	15		2.0		33.0	50
Subject objectives	To familiarize students with the role of genetic factors in the etiopathogenesis of diseases and the principles of pre- and postnatal genetic counseling. Students' knowledge and understanding of disorders of the inheritance pattern of Mendelian traits. Familiarization with the issues of epigenetic control of gene expression, characteristics of the role of genetic polymorphism and polygenic inheritance.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[BIOLMEDL3_K01] is aware of the importance of lifelong learning and keeping up to date with developments in medical biology and related disciplines, and applies this knowledge to the planning and design of professional activities		the graduate understands the need for lifelong learning and updating knowledge in the field of human genetics; understands the obligation of continuous self-education, broadening and deepening theoretical skills and practical and introducing new achievements in the field of human genetics in professional practice		[SK4] test/exam - oral or written		
	[BIOLMEDL3_U04] synthesises data from different sources and draws appropriate conclusions from them		the graduate synthesizes human genetics from various sources and draws appropriate conclusions on this basis; using information about genetic diseases contained in professional databases		[SU4] test/exam - oral or written		

Subject contents	Human chromosomal mutations. The most common genetic syndromes caused by chromosomal mutations. Disturbances in the inheritance pattern of Mendelian traits. Epigenetic control of gene expression. Genetic polymorphism. Mitochondrial diseases. Polygenic inheritance. Prenatal and preimplantation diagnosis. Teratogenesis and mutagenesis. Genetic counseling.		
Prerequisites and co-requisites	Basic knowledge of the genetics of organisms.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	exam	50.0%	100.0%
Recommended reading	Basic literature	M.J. Bamshad, J.C. Carey, L.B. Jorde; Genetyka medyczna (red. M. Borowiec), Edra Urban & Partner, Wrocław 2021. J.M Friedman, F.J.Dill, M.R. Hayden, B.C. McGillivray: Genetyka. (red. wyd. pol. J. Limon), Urban & Partner, Wrocław 2000. Drewa G., Ferenc T.; Genetyka medyczna; Edra Urban & Partner Wydawnictwo, Wrocław 2011. Bruce R. Korf. Genetyka człowieka. Rozwiązywanie problemów medycznych. Wydawnictwo Naukowe PWN, 2003.	
	Supplementary literature	Epigenetyka, John C. Lucchesi, PWN, 2021. Genetyka medyczna i molekularna, Jerzy Bal, PWN, 2017. Genetyka medyczna, Bogdan Kałużewski , Casey Carey , Lynn Jorde , Michael J. Bamshad, Edra Urban & Partner, 2013. Genetyka medyczna, Edward Tobias, PZWL, 2014.	
	eResources addresses		
	Example issues/ example questions/ tasks being completed		
Work placement	Not applicable		

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