

Subject card

Subject name and code	Medical applications of population genetics, PG_00154470						
Field of study	Biology						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2026/2027		
Education level	undergraduate studies		Subject group		Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		1.0		
Learning profile	academic		Assessment form				
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Joanna Jakóbkiewicz-Banecka				
	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		8.0	25
Subject objectives	• Introduction to Applications of Population Genetics in Medicine, Forensics, and Archaeology • Providing knowledge about quantitative traits and their impact on the genetic structure of populations • Introducing students to the topic of nutrigenomics • Establishing a foundation for critical reflection on selected issues in contemporary human genetics						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLL3_U05] The graduate will be able to synthesise data from a variety of sources and draw appropriate conclusions	Synthesize data from various sources and draw appropriate conclusions based on this information.	[SU4] test/exam - oral or written
	[BIOLL3_U07] The graduate should be able to independently search for and use available sources of biological information, including electronic sources	Independently search for and utilize available sources of biological information, including electronic sources.	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
	[BIOLL3_W03] The graduate knows the structure and functional relationships at the cellular, tissue, organ and organismal levels	Structure and functional relationships at the cellular, tissue, organ, and organism levels.	[SW4] test/exam - oral or written
	[BIOLL3_W02] The graduate knows the structure and properties of biological macromolecules, the molecular mechanisms of basal metabolic pathways and genetic information flow and the sources of variation in organisms; the rules of inheritance	Structure and properties of biological macromolecules, molecular mechanisms of basic metabolic pathways and genetic information flow, sources of organismal variability; rules of inheritance.	[SW4] test/exam - oral or written
	[BIOLL3_W10] The graduate is familiar with the development and current state of knowledge and the latest trends in biology, as well as their relationship with other natural disciplines	Development and current state of knowledge, as well as the latest trends in biology, and their connection with other natural science disciplines.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
	[BIOLL3_K09] The graduate will be able to use the knowledge acquired to plan and organise professional activities and to think and act in an entrepreneurial way	Utilization of acquired knowledge to plan and design professional activities, as well as to think and act in an entrepreneurial manner.	[SK4] test/exam - oral or written [SK8] observation of student's independent or team work
	[BIOLL3_K01] The graduate is prepared to evaluate their own knowledge, understand the need for continuous learning and development, and is open to new ideas	Assessment of one's own knowledge and understanding the need for continuous learning and development, and being open to new ideas.	[SK4] test/exam - oral or written
Subject contents	Inheritance and founder mutations. Genetic polymorphism, association, and heritability medical aspects. Molecular research in terms of determining population history and its functioning - biogeography. Behavioral genetics nature or nurture? Controversies surrounding the use of the term human race. Medical and forensic genetics. Contemporary genetic issues.		
Prerequisites and co-requisites	Basics of Genetics		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test exam	51.0%	100.0%
Recommended reading	Basic literature	1. Jorde LB, Carey JC, Bamshad MJ, Genetyka medyczna, red. wyd. polskiego Maciej Borowiec, wydanie 6, Edra Urban&Partner, 2021. 2. Genetyka medyczna i molekularna, red. J. Bał, Warszawa, Wydawnictwo Naukowe PWN, 2017. 3. Tobias E. S., Connor M., Ferguson-Smith M., Genetyka medyczna, red. wyd. pol. A. Latos-Bieleńska, Warszawa, PZWL Wydawnictwo Lekarskie, 2013. 4. Lucchesi JC. Epigenetyka. PWN, Warszawa, 2022. 5. Drewa G, Ferenc T. Genetyka medyczna, Wrocław, 2011.	

	Supplementary literature	1. Fletcher H, Hickey I, Krótkie wykłady: Genetyka, PZWL 2021. 2. Węgleński P. Genetyka molekularna, wydanie VI, PWN, 2020. 3. Genetyka kliniczna nowotworów, red. J. Lubiński, Szczecin, Print Group, 2018. 4. Medycyna personalizowana, red. A. Fronczak, Warszawa, Oficyna Wydawnicza Warszawskiego Uniwersytetu Medycznego, 2016. 5. Brown T. A., Genomy, Warszawa, Wydawnictwo Naukowe PWN, 2019.
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.