

Subject card

Subject name and code	Human embriology, PG_00154675						
Field of study	Embriologia człowieka (Wykład)						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		2.0		
Learning profile	academic		Assessment form		exam		
Conducting unit	Department of Medical Biology and Genetics -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Joanna Liss				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	20.0	0.0	0.0	0.0	0.0	20
	E-learning hours included: 0.0						
	Additional information: zajęcia poza pomieszczeniami dydaktycznymi UG: pracownia diagnostyczna, biologii molekularnej oraz cytogenetyki Medycznych Laboratoriów Diagnostycznych INVICTA, ul. Polna 64, Sopot						
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	20		3.0		27.0	50
Subject objectives	The aim of the course is to acquire theoretical knowledge in the field of the human reproductive system, gametogenesis processes, fertilization mechanisms, early embryonic development, human fertility diagnostics, methods of diagnosing genetic birth defects, as well as focusing on prevention in the field of fertility preservation.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMEDMU2_K06] is ready to solve complex ethical problems related to the profession and to determine priorities for the implementation of specific tasks	Can respectfully analyze the problem of infertility	[SK4] test/egzamin - ustny lub pisemny
	[BIOLMEDMU2_K02] is ready to recognize the importance of knowledge in solving cognitive and practical problems and to seek expert advice when having difficulty solving a problem on his own	He is aware of his own limitations and the need for continuous learning.	[SK4] test/egzamin - ustny lub pisemny
	[BIOLMEDMU2_U04] is able to identify errors and omissions in practice	Can recognize errors and omissions in fertility diagnosis and prevention	[SU4] test/egzamin - ustny lub pisemny
	[BIOLMEDMU2_W03] knows the structure and functions of the human body, biological causes of disorders, lesions and social dysfunctions, and methods of their evaluation using biochemical, molecular, parasitological or neurobiological methods	Knows the structure and functions of the human reproductive system and the biochemical and molecular methods used in fertility diagnostics.	[SW4] test/egzamin - ustny lub pisemny
	[BIOLMEDMU2_W01] has an in-depth knowledge of scientific fields and disciplines relevant to medical biology and the studied specialty and knows their main development trends	Has theoretical knowledge of basic human embryology, fertility diagnostics and prevention, and methods for diagnosing early genetic defects in gametes and embryos.	[SW4] test/egzamin - ustny lub pisemny
Subject contents	1. An outline of the history of embryology 2. The human reproductive system 3. Gametogenesis (oogenesis and spermatogenesis) 4. Molecular mechanisms of fertilization 5. Fertility diagnostics 6. In vitro fertilization, gamete and embryo assessment 7. Cryopreservation of gametes and embryos 8. Early embryonic development 9. Preimplantation genetic diagnosis 10. Congenital defects		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		51.0%	100.0%
Recommended reading	Basic literature	Bartel H., Embriologia, wyd. 6, Warszawa, PZWL Wydawnictwo Lekarskie, 2020 Embriologia i wady wrodzone Od zapłodnienia do urodzenia. 2021, Wrocław, Edra Urban& Partner autorzy Moore Keith L., T.V.N. Persaud, Torchia Mark G. red. Hieronim Bartel, Maciej Zabel Molekularne podstawy rozrodczości człowieka i innych ssaków M. Kurpisz, Termedia 2008 (strony 127-231)	

	Supplementary literature	Textbook of Assisted Reproductive Technologies D. Gardner, Informa UK 2009; (strony 39-155) Practical Preimplantation Genetic Diagnosis Verlinsky Y, Kuliev A, Springer 2005; (strony:135-157) Gruhn JR, et al. Chromosome errors in human eggs shape natural fertility over reproductive life span. Science. 2019 Sep 27;365(6460): 1466-1469.doi: 10.1126/science.aav7321. Liss J, et al. Current methods for preimplantation genetic diagnosis. Ginekol Pol. 2016;87(7):522-6. doi: 10.5603/GP.2016.0037 Genetyka E. Passarge, PZWL 2004
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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