

Subject card

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| Subject name and code | Human embriology, PG_00203487 | | | | | | |
| Field of study | Medical Biology | | | | | | |
| Date of commencement of studies | October 2026 | Academic year of realisation of subject | | | 2026/2027 | | |
| 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 | | | | | | |
| 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. | | | | | | |

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| Learning outcomes | Course outcome | Subject outcome | Method of verification |
| | [BIOLMEDMU2_W03] has an in-depth understanding of 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/exam - oral or written |
| | [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/exam - oral or written |
| | [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/exam - oral or written |
| | [BIOLMEDMU2_U04] is able to identify errors and omissions in practice | Can recognize errors and omissions in fertility diagnosis and prevention | [SU4] test/exam - oral or written |
| [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/exam - oral or written | |
| Subject contents | <ol style="list-style-type: none"> 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 | <p>Bartel H., Embriologia, wyd. 6, Warszawa, PZWL Wydawnictwo Lekarskie, 2020</p> <p>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</p> <p>Molekularne podstawy rozrodczości człowieka i innych ssaków M. Kurpisz, Termedia 2008 (strony 127-231)</p> | |

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| | Supplementary literature | <p>Textbook of Assisted Reproductive Technologies D. Gardner, Informa UK 2009; (strony 39-155)</p> <p>Practical Preimplantation Genetic Diagnosis Verlinsky Y, Kuliev A, Springer 2005; (strony:135-157)</p> <p>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.</p> <p>Liss J, et al. Current methods for preimplantation genetic diagnosis. Ginekol Pol. 2016;87(7):522-6. doi: 10.5603/GP.2016.0037</p> <p>Genetyka E. Passarge, PZWL 2004</p> |
| Example issues/ example questions/ tasks being completed | eResources addresses | |
| Work placement | Not applicable | |

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