

Subject card

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| Subject name and code | Bacterial diagnostic, PG_00154542 | | | | | | |
| Field of study | Medical Biology | | | | | | |
| Date of commencement of studies | October 2026 | Academic year of realisation of subject | | | 2027/2028 | | |
| Education level | Bachelor's studies | Subject group | | | Obligatory subject group in the field of study Optional subject group 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 | 2 | Language of instruction | | | Polish | | |
| Semester of study | 3 | ECTS credits | | | 3.0 | | |
| Learning profile | academic | Assessment form | | | exam | | |
| Conducting unit | Laboratory of Molecular Evolution and Bioinformatics -> Department of Evolutionary Genetics and Biosystematics -> Faculty of Biology -> Rector | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr Agata Jurczak-Kurek | | | | |
| | Teachers | | | | | | |
| Lesson types | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 30.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30 |
| | 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 | 30 | | 4.0 | | 41.0 | 75 |
| Subject objectives | To learn about the dangers of the new faces of pathogenic bacteria and the challenges facing microbiology today, importance of the physiological microbiota in maintaining homeostasis in the human body, the issues related to the epidemiology of infectious diseases, virulence factors of bacteria and mechanisms of pathogenesis, methods of isolation of bacteria from biological material and methods of their identification, used in a diagnostic laboratory, selected groups of microorganisms pathogenic for humans and their virulence factors and etiological factors causing selected systemic infections. | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | Method of verification | | |
| | [BIOLMEDL3_W07] has advanced knowledge of medical biology and is familiar with the health sciences terminology | | The student has advanced knowledge of methods of identifying bacteria and the lesions they cause | | [SW4] test/exam - oral or written | | |
| | [BIOLMEDL3_W16] explains the theoretical basis of experimental methods and lists the most important techniques of biological sciences that can be applied to medical biology and diagnostics | | The student explains the theoretical basis of experimental methods and lists the most important techniques that can be applied to bacteriological diagnosis | | [SW4] test/exam - oral or written | | |
| | [BIOLMEDL3_W11] posiada zaawansowaną wiedzę dotyczącą metod oceny stanu zdrowia oraz objawów i przyczyn wybranych zaburzeń i zmian chorobowych oraz zna podstawy zdrowego trybu życia, potrafi je uzasadnić i promować | | The student has advanced knowledge of methods of identifying bacteria and the lesions they cause | | [SW4] test/exam - oral or written | | |

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| Subject contents | Microbiology in the past and today, problems and challenges facing microbiology today. Selected issues in epidemiology of infectious diseases. Physiological microbiota and its importance for the human body. Virulence factors of bacteria and their role in the mechanisms of pathogenesis. Review of selected groups of bacteria causing infectious diseases that are currently a significant medical problem. Methods of isolation and identification of bacterial etiological agent. Principles of collection of material for bacteriological studies and its storage and transport to the laboratory. Issues in the diagnosis of selected systemic infections. Selected issues related to nosocomial infections. Antibiotics and chemotherapeutics - mechanisms of their action and bacterial resistance. | | |
| Prerequisites and co-requisites | Completed course in basic microbiology | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | Written test exam | 51.0% | 100.0% |
| Recommended reading | Basic literature | 1. Szewczyk E.M. Diagnostyka bakteriologiczna. Wyd. Naukowe PWN, Warszawa 2020 2. Irving W., Boswell T., Ala'Aldeen D. Mikrobiologia medyczna. Wyd. Naukowe PWN, Warszawa 2012 | |
| | Supplementary literature | 1. Salyer A.A., Whitt D.D. Mikrobiologia. Wyd. Naukowe PWN, Warszawa 2005 2. Tille P.M. Bailey & Scott's diagnostic microbiology. Fourteenth edition. Elsevier 2017 | |
| | eResources addresses | | |
| Example issues/ example questions/ tasks being completed | 1. The human physiological microbiota 2. Virulence factors of bacteria 3. Phenotypic and molecular methods of identifying bacteria pathogenic to humans | | |
| Work placement | Not applicable | | |

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