

**Subject card**

<b>Subject name and code</b>	Bacterial diagnostic, PG_00203397						
<b>Field of study</b>	Medical Biology						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2027/2028		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	2	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	3	<b>ECTS credits</b>			2.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			credit		
<b>Conducting unit</b>	Laboratory of Molecular Evolution and Bioinformatics -> Department of Evolutionary Genetics and Biosystematics -> Faculty of Biology -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	Subject supervisor		dr Agata Jurczak-Kurek				
	Teachers						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	0.0	0.0	30.0	0.0	0.0	30
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	30		6.0		14.0	50
<b>Subject objectives</b>	To learn the principles of work in a bacteriological laboratory. To familiarize students with the methods of isolation of bacteria and methods of identification of more important groups of bacteria and assessment of their drug susceptibility.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMEDL3_W16] has an advanced knowledge of the experimental methods and 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	[SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
	[BIOLMEDL3_W11] has advanced knowledge of methods for assessing health status, as well as the symptoms and causes of selected disorders and pathological changes; understands the basics of a healthy lifestyle and is able to explain and promote them	The student has advanced knowledge of methods of identifying bacteria and the lesions caused by them	[SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
	[BIOLMEDL3_W07] has advanced knowledge of medical biology and is familiar with the health sciences terminology	The student has advanced knowledge of clinical microbiology and is familiar with its terminology	[SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
	[BIOLMEDL3_K05] jest odpowiedzialny za bezpieczeństwo pracy własnej i innych oraz potrafi rozpoznać sytuacje zagrożenia i podjąć odpowiednie działania	While working in the microbiology laboratory, the student is responsible for the safety of himself and others and is able to recognize risk situations and take appropriate action	[SK8] observation of student's independent or team work
[BIOLMEDL3_U03] performs simple tasks or research expertise typical of medical biology under the guidance of a supervisor	The student, under the guidance of a research supervisor, performs simple tasks and expertise research typical of medical microbiology	[SU5] implementation of a problem task [SU6] demonstration of practical skills [SU8] observation of student's independent or team work	
Subject contents	Principles of health and safety in the microbiology laboratory. Sterilization techniques and principles of asepsis. Techniques of culture microorganisms, microbiological media. Methods of determining bacterial susceptibility to antibiotics and bacterial mechanisms of drug resistance. Antibioqram and its interpretation. Differentiation of selected bacteria constituting the physiological microbiota and bacteria pathogenic to humans using microscopic, biochemical, serological and molecular methods.		
Prerequisites and co-requisites	Completed basic microbiology course.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Final grade based on: - partial grades (tests) (40%) - individual student work (practice) (60%)	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. What phenotypic methods identify coagulase-negative <i>Staphylococcus</i> species?  2. Which species of pathogenic <i>Enterobacterales</i> show abnormal growth on solid media?		
Work placement	Not applicable		

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