University of Gdańsk

Subject card

Subject name and code	Introduction to phytopathology, PG_00198269						
Field of study	Biotechnology						
Date of commencement of studies	October 2025		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	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		2.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Intercollegiate Faculty of Biotechnology UG-MUG -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr n. med. Dorota Pomorska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	16.0	0.0	0.0	0.0	0.0	16
	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	16		5.0		29.0	50
Subject objectives	The aim of the course is to familiarize students with the basic knowledge in the field of phytopathology. During the course, students will become familiar with the history of research on plant diseases and the latest scientific achievements, and will learn the characteristic terminology and processes related to the mechanism of plant infection. They will become familiar with the biological features of selected plant pathogens, their importance and methods of identification of plant disease.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BIOTECHL3_W03] The graduate possesses structured and advanced knowledge of organism-environment relationships and their importance for understanding biological processes and biotechnological applications.	KW_03_B	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
[BIOTECHL3_K03] The graduate is willing to understand risks and dilemmas, including ethical dilemmas related to conducting scientific research and introducing advanced technologies using the achievements of biotechnology; understand and appreciate the importance of intellectual property; behave ethically.	KK_03_BM	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written [SK5] implementation of a problem task [SK8] observation of student's independent or team work
[BIOTECHL3_K05] The graduate is willing to understand the need to inform the society about the achievements of biotechnology important for the improvement of health and quality of life.	KK_05_BM	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written [SK5] implementation of a problem task
[BIOTECHL3_W07] The graduate has advanced knowlegde of the rules of operation and the possibilities of using research techniques and tools used in biotechnology.	KW_07_BM	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task

Subject contents

- introduction to the concept of plant cultivation and diseases, including basic therms used in the field of studies of plant diseases
- history (Polish and foreign phytopathologists, key discoveries and observations in phytopathology) and future of phytopathology (latest discoveries, research methods and concepts)
- biology of plant pathogens, including bacterial, fungal, viral pathogens, phytoplasmas, plant pathogenic nematodes and parasitic plants (development cycle, host range, transmission vectors, examples of diseases)
- methods for detection and identification of plant pathogens (Koch's postulates in relation to plant pathogens, disease symptoms caused by selected plant pathogens, methods based on nucleic acids, antibodies, detection of plant pathogens in the XXI century)
- plant pathogen control methods (chemical, physical methods)
- biological protection of plants
- plant pathogens as useful molecular tools (*Agrobacterium tumefaciens*), research models of plant-pathogen interactions, source of useful biological compounds, food source

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
	0.0%	20.0%
	51.0%	80.0%

Recommended reading

Basic literature	A.1. Analysed during classes L. Garbowski - "Outline of phytopathology" S. Kryczyński - "Basics of phytopathology" A.2. studied independently by the student P. Sobiczewski, M. Schollenberger "Bacterial diseases of horticultural plants"
Supplementary literature	H. S. Chaube, R. Singh Introductory plant pathology
eResources addresses	

Example issues/ example questions/ tasks being completed

Work placement	Not applicable

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