

1.	Field of study	Biotechnology
2.	Faculty	Faculty of Natural Sciences
3.	Academic year of entry	2025/2026 (winter term)
4.	Level of qualifications/degree	first-cycle studies
5.	Degree profile	general academic
6.	Mode of study	full-time

7.	General information about the module	
Module name		Basics of microscopy
Module code		1BT_23_46
Number of the ECTS credits		1
Language of instruction		
Purpose and description of the content of education		The subject "Basics of microscopy" provides basic knowledge of light microscopy techniques used today in biological research. The subject familiarizes the student with the structure, principle of operation and applications of the bright field microscope. The main emphasis is placed on the ability to independently use a light microscope, determine the actual dimensions of biological objects, acquire the ability to analyze and interpret microscopic images.
List of modules that must be completed before starting this module (if necessary)		not applicable

8.	Learning outcomes of the module			
Code	Description	Learning outcomes of the programme	Level of competenc (scale 1-5)	
K01	Understands the basic principles of ethical conduct in life and at work.	1BT_K04	3	
U01	Demonstrates the ability to work independently as well as work and communicate in a team.	1BT_U04	4	
W01	Has basic knowledge of sciences necessary for the proper use of light microscopy for structure analysis of plant cells and tissues.	1BT_W01 1BT_W09	3 2	
W02	Can describe the biological structures at the level of a light microscope on the basis of acquired practical skills, is able to determine the real dimensions of biological objects.	1BT_W03	4	

9.	Methods of conducting classes		
	Code	Category	Name (description)
	c07	Demonstration methods	Screen presentation <i>a presentation of synthetic image content using computer graphics, e.g., a series of slides or other multimedia forms, usually accompanied by a commentary; typical components of a screen presentation include text organized into bulleted points, charts, images and animations, sometimes sound effects or music; a multimedia illustration of course content presented in the form of a projected image</i>
	d03	Programmed learning methods	Working with another teaching tool

		e.g. using websites in any way or according to the rules set by the teacher; or making use of other subject-specific tools
e01	Practical methods	Laboratory exercise / experiment <i>[also conducted as fieldwork] a method of practical application of knowledge; implemented in three stages: the recognition of a problem induced by the task content, the formulation of the problem and the attempt to solve it accompanied by the assessment of the effects; the goal is to acquire skills, abilities and habits, and to consolidate the acquired knowledge so that it becomes operational; the laboratory method assumes greater independence of learners than carrying out an experiment</i>

10. Forms of teaching					
Code	Name	Number of hours	Assessment of the learning outcomes of the module	Learning outcomes of the module	Methods of conducting classes
L_1	laboratory classes	15	course work	K01, U01, W01, W02	c07, d03, e01

11. The student's work, apart from participation in classes, includes in particular:				
Code	Category	Name (description)		Is it part of the BUNA?
b01	Consulting the curriculum and the organization of classes	Getting acquainted with the syllabus content <i>reading through the syllabus and getting acquainted with its content</i>		Yes
d01	Consulting the results of the verification of learning outcomes	Analysis of the corrective feedback provided by the academic teacher on the results of the verification of learning outcomes <i>reading through the academic teacher's comments, assessments and opinions on the implementation of the task aimed at checking the level of the achieved learning outcomes</i>		Yes
d02	Consulting the results of the verification of learning outcomes	Development of a corrective action plan as well as supplementary/corrective tasks <i>reviewing and selecting tasks and activities enabling the elimination of errors indicated by the academic teacher, their verification or correction resulting in completing the task with at least the minimum passing grade</i>		Yes

Information on the details of the module implementation in a given academic year can be found in the syllabus available in the USOS system: <https://usosweb.us.edu.pl>.