

1.	Field of study	Biophysics	
2.	2. Faculty Faculty of Science and Technology		
3.	3. Academic year of entry 2023/2024 (winter term), 2024/2025 (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 t	General information about the module		
Module name	Introduction to Experiment		
Module code	W4-BF-S1-1-23-05		
Number of the ECTS credits	3		
Language of instruction	Polish		
Purpose and description of the content of education	The objective of the module is to familiarize students with the concept of the experiment as one of the scientific methods. As part of the course, students will learn the definitions and types of experiments, and become familiar with the basics of metrology and the measurement environment. In addition to the theoretical aspects, students will perform simple experiments and analyze the obtained data.		
List of modules that must be completed before starting this module (if necessary)	not applicable		

8. Learning	earning outcomes of the module				
Code	Description	Learning outcomes of the programme	Level of competent (scale 1-5)		
E1	The student knows the basic concepts of metrology, including systems of units, measuring tools, measurement methods,	U04	1		
	and basics of error calculus, and understands their interrelationship.	U08	1		
		W07	1		
E2	The student has an in-depth knowledge of the methods and instruments used to measure basic physical quantities and can perform a simple experiment.	U04	1		
E3	The student knows and understands the regulations of laboratories, knows the supervising institutions, takes care of	U08	1		
	health and safety, and acts ethically.	U09	1		
		U10	1		
		W09	1		
		W10	1		
E4	The student has knowledge of the measurement environment, laboratory apparatus, and simple measuring instruments.	K01	1		
		K02	1		
		K04	1		

Code	Category			Name (description)			
a05	Lecture methods / expository method	expli	Explanation/clarification explication involving the derivation of a predetermined theorem from other, already known ones, in the number of step specified by the person teaching the course			umber of steps	
b09	Problem-solving methods	antic prep partic	Activating method – flipped classroom anticipatory learning; work in class is based on previously studied material indicated by the person teaching the course; preparation outside the classroom serves the purpose of getting familiar with the issues whose knowledge is necessary for participating in the in-class discussion and the training in the related practical skills; the activity is based on the work of students under the guidance of the person teaching the course			ie is necessary for	
c07	Demonstration methods	a pre acco char	Screen presentation a presentation of synthetic image content using computer graphics, e.g., a series of slides or other multimedia forms, usual 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			bulleted points,	
e01	Practical methods	Laboratory exercise / experiment [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 the it becomes operational; the laboratory method assumes greater independence of learners than carrying out an experiment					
f01	Methods of self-learning						
f02	Methods of self-learning	sear sear	Individual work with a text searching for and acquiring new information using textbooks and other written sources (including their digital versions); searching for texts, selecting fragments for analysis/interpretation, using other texts to solve a problem related to the studied issue				
10. Forms of t	eaching						
Code	Name	Number of hours	Assessment of the learning outcomes of the module	Learning outcomes of the module	Methods of co	Methods of conducting classes	
FZ1	workshop	30	course work	E1, E2, E3, E4	a05, b09, c07,	e01, f01, f02	
11. The studer	nt's work, apart from participation in cla	asses, includes	in particular:				
Code	Category		No	me (description)		Is it part of the	

11.	The student's work, apart from participation in classes, includes in particular:			
	Code	Category	Name (description)	Is it part of the BUNA?
a02			Literature reading / analysis of source materials reading the literature indicated in the syllabus; reviewing, organizing, analyzing and selecting source materials to be used in class	No
a03			Developing practical skills activities involving the repetition, refinement and consolidation of practical skills, including those developed during previous classes or new skills necessary for the implementation of subsequent elements of the curriculum (as preparation for class participation)	Yes

a05	Preparation for classes	Production/preparation of tools, materials or documentation necessary for class participation developing, preparing and assessing the usefulness of tools and materials (e.g. aids, scenarios, research tools, equipment, etc.) to be employed in class or as an aid when preparing for classes	No
b01	Consulting the curriculum and the organization of classes	Getting acquainted with the syllabus content reading through the syllabus and getting acquainted with its content	No
b02	Consulting the curriculum and the organization of classes	Verification / adjustment / discussion of syllabus provisions consulting the content of the syllabus, possibly in the presence of the year tutor or members of the class group, and, if necessary, reassessing the provisions concerning special conditions for class participation, e.g., space and time requirements, technical and other requirements, including conditions for participation in classes outside the walls of the university, classes organized in blocks, organized online, etc.	Yes
c03	Preparation for verification of learning outcomes	Implementation of an individual or group assignment necessary for course/phase/examination completion a set of activities aimed at performing an assigned task, to be executed out of class, as an obligatory phase/element of the verification of the learning outcomes assigned to the course	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: <a href="https://usosweb.us.edu.pl">https://usosweb.us.edu.pl</a>.