1.	**Field of study**	**Scientific Information and Library Science**
2.	Faculty	Faculty of Humanities
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	part-time

7.	**General information about the module**
Module name	**Physicochemical Analysis of Cultural Heritage Materials**
Module code	W1-BN-N1-OPAF03
Number of the ECTS credits	2
Language of instruction	Polish
Purpose and description of the content of education	As part of the module, students will gain knowledge in the field of chemistry, physics, materials science and conservation of cultural heritage materials. The practical use of physicochemical methods will serve the protection and conservation of various objects of cultural heritage. The implementation of the module is primarily aimed at teaching students the practical application of theory so that they are able to select and use methods and tools from the field of natural sciences in the protection and conservation of cultural heritage. Support for this goal is provided by activating teaching methods and the development of manual skills in direct work with heritage objects.
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)
OPAF03_1	student zna w zaawansowanym stopniu terminologię i metodologię z zakresu chemii, fizyki, materiałoznawstwa i konserwatorstwa, stosując je w kontekście ochrony i analizy obiektów dziedzictwa kulturowego; ma zaawansowaną wiedzę o metodach oceniania zmian fizycznych czy chemicznych zachodzących w materiale badawczym	K_W02	5
OPAF03_2	student zna obowiązujące normy prawne i zasady etyczne zarówno krajowe jak i międzynarodowe, wykorzystywanych w pracy konserwatorskiej, bibliotecznej i informacyjnej	K_W10	3
OPAF03_3	student potrafi rozpoznać zniszczenia wywołane przemianami chemicznymi na obiektach dziedzictwa kulturowego oraz przeprowadzić badania chemiczne z wykorzystaniem metod instrumentalnych i analitycznych zgodnie z aktualnymi europejskimi i międzynarodowymi standardami konserwatorskimi	K_U02	4
OPAF03_4	student potrafi ocenić zmiany fizyczne czy chemiczne zachodzące w materiale badawczym. Analizuje, interpretuje i opracowuje wyniki otrzymanych badań	K_U01	4
OPAF03_5	student jest gotów przestrzegać zapisów kodeksów etycznych związanych z pracami konserwatorskimi materiałów dziedzictwa kulturowego, kierując się zasadami poszanowania autentyczności, integralności i wartości historycznych obiektów	K_K05	5

9.	Methods of conducting classes	
Code	**Category**	**Name (description)**
b08	Problem-solving methods	Activating method – peer learning *learning through the exchange of knowledge in a group/team/pair of students, i.e., in the so-called learning cell; a kind of mutual learning; an approach focused on student activity under the guidance of the person teaching the course; a learning situation where students with a similar level of experience learn from one another*
b09	Problem-solving methods	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*
c07	Demonstration methods	Screen presentation *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*
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 *[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*

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**
OPAF03_fs_1	laboratory classes	10	course work	OPAF03_1, OPAF03_2, OPAF03_3, OPAF03_4, OPAF03_5	b08, b09, 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?**
a01	Preparation for classes	Search for materials and review activities necessary for class participation *reviewing literature, documentation, tools and materials as well as the specifics of the syllabus and the range of activities indicated in it as required for full participation in classes*	No
a03	Preparation for classes	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)*	No
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*	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 *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*	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.