

1.	Field of study	Mathematics
2.	Faculty	Faculty of Science and Technology
3.	Academic year of entry	2023/2024 (winter term)
4.	Level of qualifications/degree	second-cycle studies
5.	Degree profile	general academic
6.	Mode of study	full-time

7. General information about the module	
Module name	Chemistry in Exercise
Module code	W4-MT-S2-23-ChwZ
Number of the ECTS credits	4
Language of instruction	Polish
Purpose and description of the content of education	Moduł ma na celu pogłębienie rozumienia treści programowych z zakresu chemii realizowanej w szkole ponadpodstawowej w stopniu umożliwiającym osiągnięcie biegłości w rozwiązywaniu zadań z chemii na poziomie rozszerzonym, zadań maturalnych oraz konkursowych. Realizowane treści umożliwią Studentom dobór odpowiednich metod pracy z uczniem i wybór rozwiązań metodycznych odpowiednich do potrzeb i możliwości ucznia.
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)
ChwZ_01	Zna i rozumie metodykę realizacji poszczególnych treści kształcenia z przedmiotu chemia - rozwiązania merytoryczne i metodyczne, dobre praktyki, dostosowanie oddziaływań do potrzeb i możliwości uczniów o różnym potencjale i stylu uczenia się.	KN.2023_U02 KN.2023_U04 KN.2023_W02 KN.2023_W14 KN.2023_W15	3 3 3 3 3
ChwZ_02	Zna i potrafi rozpoznać typowe dla chemii błędy uczniowskie i sposoby zapobiegania im poprzez stosowanie odpowiednich metod pracy z uczniem.	KN.2023_U10 KN.2023_W02 KN.2023_W14	4 4 4
ChwZ_03	Zna i rozumie stosowane metody kształcenia w odniesieniu do nauczanego przedmiotu lub prowadzonych zajęć.	KN.2023_U02 KN.2023_U06 KN.2023_W02 KN.2023_W15	4 4 4 4
ChwZ_04	Potrafi identyfikować typowe zadania szkolne z celami kształcenia, w szczególności w odniesieniu do podstawy programowej	KN.2023_U02	3

		KN.2023_U04	3
		KN.2023_W14	3
ChwZ_05	Jest gotów do motywowania uczniów do uczenia się przez całe życie przez samodzielną pracę.	KN.2023_KS04	3
		KN.2023_U06	4
		KN.2023_U10	4
		KN.2023_W02	4
		KN.2023_W03	4

9. Methods of conducting classes		
Code	Category	Name (description)
b05	Problem-solving methods	Activating method – seminar / proseminar <i>a seminar method; usually an oral presentation of a previously studied/diagnosed problem delivered on a forum; it aims at provoking a discussion concerning the results of research work; a type of conference, course or training session modelled on seminar classes</i>
b09	Problem-solving methods	Activating method – flipped classroom <i>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</i>
d03	Programmed learning methods	Working with another teaching tool <i>e.g. using websites in any way or according to the rules set by the teacher; or making use of other subject-specific tools</i>
f01	Methods of self-learning	Self-education <i>a method which involves independent acquisition of knowledge, skills and social competences, extending their scope and quality; complementary to the learning process taking place in class; taking on the task of developing and adjusting qualifications on one's own; self-study</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
ChwZ_fs_01	practical classes	45	course work	ChwZ_01, ChwZ_02, ChwZ_03, ChwZ_04, ChwZ_05	b05, b09, d03, f01

11. The student's work, apart from participation in classes, includes in particular:			
Code	Category	Name (description)	Is it part of the BUNA?
a02	Preparation for classes	Literature reading / analysis of source materials <i>reading the literature indicated in the syllabus; reviewing, organizing, analyzing and selecting source materials to be used in class</i>	Yes
a03	Preparation for classes	Developing practical skills <i>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)</i>	Yes

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>	No
c02	Preparation for verification of learning outcomes	Studying the literature used in and the materials produced in class <i>exploring the studied content, inquiring, considering, assimilating, interpreting it, or organizing knowledge obtained from the literature, documentation, instructions, scenarios, etc., used in class as well as from the notes or other materials/artifacts made in class</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>.