1.	**Field of study**	**Biophysics**
2.	Faculty	Faculty of Science and Technology
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 the module**
Module name	**Elements of Nuclear Physics in Medicine**
Module code	W4-BF-FA-S1-6-23-36
Number of the ECTS credits	3
Language of instruction	Polish
Purpose and description of the content of education	The main objective of the module is to familiarize students with selected issues of nuclear physics and their application in the field of medicine, particularly nuclear medicine. During the course, students will learn the basic elements of nuclear physics and discuss the interaction of nuclear radiation with matter and the possibility of using this radiation for diagnostic and therapeutic purposes and in structural research.
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)
E1	The student knows and understands the basic physical phenomena occurring in nature, the methods of their description and the use of physical research to explain the structure of organisms and the phenomena occurring in them.	U01 U02 W08	1 1 1
E2	The student knows the laws and formulas of nuclear physics and can apply them to the calculation of parameters of the properties of organic matter, substances and medicinal materials.	U05 U07	1 1
E3	The student can carry out the experiment using ionized radiation correctly, document and present the results of the measurements and present their interpretation.	U04	1
E4	The student can obtain information from literature, databases and other sources in order to deepen his knowledge of biophysics and acquire scientific discussion skills.	K01 K02 U08	1 1 1
E5	The student knows and understands the principles of laboratory work, takes care of safety and hygiene in the biological laboratory, and conscientiously analyses experimental data.	U10 W10	1 1

9.	Methods of conducting classes	
Code	**Category**	**Name (description)**
a01	Lecture methods / expository methods	Formal lecture/ course-related lecture *a systematic course of study involving a synthetic presentation of an academic discipline; its implementation assumes a passive reception of the information provided*
b07	Problem-solving methods	Activating methods: a case study *a comprehensive description of a phenomenon connected with the selected discipline; reflecting the reality, presenting the 'what', 'where' and 'how' of the phenomenon, i.e., all of its key aspects to be discussed in class; used as a reproduction, presentation, discussion or diagnosis of factors that shape the phenomenon or interact with it; an in-depth qualitative analysis and evaluation of a selected phenomenon*
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*

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**
FZ1	workshop	30	course work	E1, E2, E3, E4, E5	a01, b07, b08

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 *reading the literature indicated in the syllabus; reviewing, organizing, analyzing and selecting source materials to be used in class*	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)*	Yes
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
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: https://usosweb.us.edu.pl.