

A description of the learning outcomes in terms of knowledge (W), skills (U) and social competence (K) is provided in the table:

LEARNING OUTCOMES		
Symbol for the learning outcome	Description of the learning outcome	Reference to the 8th level of Polish Qualification Framework
WIEDZA		
W01	Has extensive general knowledge of the chosen scientific discipline (biological sciences or chemical sciences).	P8S_WG
W02	Has precise knowledge related to the area of research conducted, taking into account the latest scientific reports.	P8S_WG
W03	Has detailed knowledge of research techniques and research methodology in the chosen scientific discipline.	P8S_WG
W04	Has knowledge of the acquisition of scientific information.	P8S_WG
W05	Has a detailed knowledge of professional academic vocabulary in the area of research conducted in the native language and English.	P8S_WG
W06	Has a basic knowledge of the methods of statistical data analysis and detailed knowledge of the statistical tools used in the analysis of its own results	P8S_WG
W07	Has knowledge of fundraising for research.	P8S_WK

W08	Is aware of the principles concerning the integrity of scientific research and the publication of results.	P8S_WK
W09	S/he is familiar with the ethics of medical research involving human beings and human tissues and the humane handling of laboratory animals.	P8S_WK
W10	S/he is familiar with the rules for the conduct of doctoral dissertations in universities and research institutes.	P8S_WK
SKILLS		
U01	S/he is able to formulate a research problem and identify research methods to solve it.	P8S_UW
U02	S/he has an outstanding command of research in the area of his/her own research.	P8S_UW
U03	S/he is able to acquire scientific information and assess the relevance of recent scientific reports in the biological and chemical sciences discipline in the context of his/her own research.	P8S_UW
U04	S/he is able to present the results of the research work in the form of a publication, conference report or multimedia presentation, analyse and critically discuss them in Polish and English.	P8S_UK
U05	S/he is able to correctly prepare an application for research funding for young researchers.	P8S_UW
U06	S/he is able to teach using up-to-date knowledge and teaching methods.	P8S_UU
U07		P8S_UO

	S/he is able, under the supervision of the supervisor or supervisor and assistant supervisor, to prepare a dissertation and to present its main ideas during the public defence.	
SOCIAL COMPETENCES		
K01	S/he is aware of the significant role of the scientist and researcher in the development of the biological and chemical sciences for the well-being of societies and the enhancement of their quality of life.	P8S_KK
K02	S/he is skilled in thinking and acting in a creative and entrepreneurial manner, creating new ideas and seeking innovative solutions and is aware of the responsibility for the consequences of his/her actions and decisions.	P8S_KK
K03	S/he understands the responsibility of continuously expanding his/her knowledge and improving his/her research skills. S/he is ready to critically evaluate scientific achievements in the discipline of biological and chemical sciences and his/her own contribution to the development of the discipline. S/he is aware of his/her own limitations and understands the need for getting advice and exchange of experience within the scientific community.	P8S_KK
K04	S/hhe understands the principles of working creatively in a research team in the process of conducting scientific research, developing results and producing scientific publications.	P8S_KO
K05	S/he understands and applies the principles of scientific ethics including research and publication integrity	P8S_KR
K06	S/he applies the principles of ethics, including data confidentiality, in scientific research. Follows the principles of humanitarian treatment of laboratory animals in scientific research and strictly follows the recommendations of the research surveillance authorities.	P8S_KR
		P8S_KR

K07	S/he is aware of the ethical, legal and economic responsibility of spending funds raised for research as designated.	
K08	S/he is responsible and able to take care of his/her own safety and that of his/her colleagues in the workplace.	P8S_KO
K09	S/he understands the importance and social relevance of teaching activities in the field. Is committed to the training of specialists in the field, as well as to the responsible communication of knowledge and opinions on scientific achievements to society.	P8S_KR
K10	Follows good academic behaviour, understands the importance and creativity of the teacher-student relationship.	P8S_KR