

Name of field: chemistry				
Level: II				
Area / areas of education with the determination of the percentage of the share of outcomes in each of the following areas: science				
Profil: general academic				
Level of the Polish Qualification Framework: 7				
Symbols of the degree course effects	FIELD LEARNING OUTCOMES ⁱ	Reference to		
		First level universal descriptors PQF	Second level descriptors PQF - general	Second level descriptors PQF for the science area
1	2	3	4	5
Field effects symbols	KNOWLEDGE	Code of the description component	Code of the description component	Code of the description component
K_W01	The graduate knows and understands selected facts, theories and phenomena as well as methods in the field of chemistry, including complex relationships between them, also in connection with other fields	P7U_W	P7S_WG	P7S_WG
K_W02	The graduate knows and understands theoretical foundations in chemistry, has structured knowledge covering key issues and main trends in chemistry and knows and understands selected issues in the field of advanced detailed knowledge	P7U_W	P7S_WG	P7S_WG
K_W03	The graduate knows and understands the specificity of chemistry and the latest achievements and trends in the development of chemistry	P7U_W	P7S_WG	P7S_WG
K_W04	The graduate knows and understands the current directions of development and the latest discoveries in the field of chemistry	P7U_W	P7S_WG	P7S_WG
K_W05	The graduate knows and understands the fundamental dilemmas of modern civilization	P7U_W	P7S_WK	P7S_WK
K_W06	The graduate knows and understands the ethical and legal conditions related to the scientific, didactic and implementation activities	P7U_W	P7S_WK	P7S_WK
K_W07	The graduate knows and understands the place and significance of chemistry for the progress of exact and natural sciences, the knowledge of the world and the development of civilization	P7U_W	P7S_WK	P7S_WK
K_W08	The graduate knows and understands the economic, legal and other determinants of their activities, including copyrights, intellectual property management and forms of development of individual entrepreneurship	P7U_W	P7S_WK	P7S_WK
	SKILLS	Code of the description component	Code of the description component	Code of the description component
K_U01	The graduate can apply the acquired knowledge in the field of chemistry to related fields of science and scientific disciplines	P7U_U	PS7-UW	PS7-UW
K_U02	The graduate can formulate and solve complex and unusual problems in chemistry in new situations by: proper selection of sources and information from them, evaluation, analysis, synthesis and interpretation and presentation of this information and through the selection and use of appropriate methods and tools, including advanced information and communication techniques (ICT)	P7U_U	PS7-UW	PS7-UW
K_U03	The graduate can communicate with diverse groups of recipients, adequately justify the position in the discussions in the field of chemistry, he/she can lead the debate	P7U_U	PS7-UK	PS7-UK
K_U04	The graduate is able to use a foreign language at the B2 + level of the Common European Framework of Reference for Languages and to a greater extent in the area of specialist terminology	P7U_U	P7S_UK	P7S_UK

K_U05	The graduate has the ability to work independently and in a group, can manage the work of the team, plan, manage and implement various tasks in the field of chemistry	P7U_U	PS7-UO	PS7-UO
K_U06	The graduate can plan their own lifelong learning and guide others in this area, develop knowledge and deepen practical skills related to chemistry	P7U_U	PS7-UU	PS7-UU
SOCIAL COMPETENCES		Code of the description component	Code of the description component	Code of the description component
K_K01	The graduate is ready to create and develop models of proper behaviour in the work and life environment, take initiatives, critically evaluate themselves and the teams and organizations in which they participate	P7U-K	P7S_KK	P7S_KK
K_K02	The graduate is ready to lead the group and take responsibility for it	P7U-K	P7S_KK	P7S_KK
K_K03	The graduate is ready to critically evaluate the received content and recognize the importance of chemical knowledge in solving cognitive and practical problems	P7U-K	P7S_KK	P7S_KK
K_K04	The graduate is ready to fulfill social obligations, inspire and organize activities for the social environment	P7U-K	P7S_KO	P7S_KO
K_K05	The graduate is ready to initiate activities for the benefit of public thinking and acting in an entrepreneurial way	P7U-K	P7S_KO	P7S_KO
K_K07	The graduate is ready to develop the achievements and ethos of the chemist profession, adhere to and develop principles of professional ethics and to act in favor of observing these principles ad	P7U-K	P7S_KR	P7S_KR

¹ The description of the intended learning outcomes for the field of studies, level and educational profile includes:

- 1) all the universal first level descriptors defined in the Act of 22 December 2015 on the Integrated Qualification System (ZSK) (Journal of Laws of 2016, item 64 and 1010) appropriate for a given level of the Polish Qualification Framework;
- 2) all the second level descriptors (general) defined in the regulation of the Minister of Science and Higher Education of September 26, 2016 on the second level descriptors of the Polish Qualification Framework typical for the qualifications obtained in higher education after obtaining a qualification on level 4 - level 6- 8 (part I);
- 3) selected learning outcomes relevant to the area or areas of education to which the field of study was assigned for qualifications at a given level of the Polish Qualifications Framework contained in the Regulation of the Minister of Science and Higher Education of September 26, 2016 regarding the second level descriptors of the Polish Qualification Framework typical for the qualifications obtained within higher education after obtaining a qualification on level 4 - level 6-8 (part II - appropriate for a given area/areas of education, level and profile).