



	principles of disseminating results of scientific activity, also in an open access mode,	<b>SzD_W04</b>
<b>P8S_WK</b>	fundamental dilemmas of the contemporary civilization,	<b>SzD_W05</b>
	economic, legal, ethical and other vital conditions related to scientific activity,	<b>SzD_W06</b>
	basic principles of knowledge transfer to the economic and social sphere as well as those of commercialization of results of scientific activities and know-how related to these results.	<b>SzD_W07</b>
<b>SKILLS (U)</b> A doctoral student can:		
<b>P8S_UW</b>	use knowledge from different branches of science to creatively identify, formulate and innovatively solve complex problems or to perform research tasks such as: <ul style="list-style-type: none"> <li>- define the aim and subject of scientific research, form a research hypothesis,</li> <li>- develop research methods, techniques and tools and use them creatively,</li> <li>- draw conclusions on the basis of research results,</li> </ul>	<b>SzD_U01</b>
	critically analyze and assess scientific research results, work of experts and other creative activities together with their contribution into knowledge development,	<b>SzD_U02</b>
	transfer the results of scientific activity to the economic and social sphere,	<b>SzD_U03</b>
<b>P8S_UK</b>	communicate on specialist issues on the level that allows active participation in the international scientific community,	<b>SzD_U04</b>
	share results of scientific activity also in a popular form,	<b>SzD_U05</b>
	initiate debates,	<b>SzD_U06</b>
	take part in scientific discourse,	<b>SzD_U07</b>
	use the English language on at least B2 level, according to the Common European Framework of Reference for Languages (CEFR), to a degree which allows active participation in the international scientific and professional community,	<b>SzD_U08</b>
<b>P8S_UO</b>	plan and implement individual and team research projects, also in the international community,	<b>SzD_U09</b>
<b>P8S_UU</b>	independently plan and act for their self-development as well as inspire and organize development of others,	<b>SzD_U10</b>
	plan classes and groups of classes and conduct them with the use of up-to-date methods and tools.	<b>SzD_U11</b>
<b>SOCIAL COMPETENCIES (K)</b> A doctoral student is ready to:		
<b>P8S_KK</b>	critically assess achievements within a given scientific discipline,	<b>SzD_K01</b>
	critically evaluate their own contribution to development of a given scientific discipline,	<b>SzD_K02</b>
	acknowledge the importance of knowledge in solving cognitive and practical problems,	<b>SzD_K03</b>
<b>P8S_KO</b>	fulfilling the social obligations of researchers and creators,	<b>SzD_K04</b>
	initiate actions in the public interests,	<b>SzD_K05</b>

	think and act in an entrepreneurial manner,	<b>SzD_K06</b>
<b>P8S_KR</b>	maintain and develop the ethos of research and creative communities, including: <ul style="list-style-type: none"> <li>- conducting independent scientific activity,</li> <li>- respecting the principle of public ownership of the results of scientific activities, including the principles of intellectual property protection.</li> </ul>	<b>SzD_K07</b>

4. The learning outcomes are achieved by the doctoral student as a result of:
  - a) realization of an individual training program including obligatory and elective courses (obtaining at least 43 ECTS credits, including the minimum number of credits as stipulated in § 3 sec. 2 in particular modules) and also completion of an internship and professional practical trainings;
  - b) realization of an individual research plan, in particular scientific research, preparation of scientific publications and doctoral dissertation;
  - c) being part of the academic community of the University and taking part in different forms of activities organized by the Doctoral School and University Units;
  - d) carrying out education and scientific research in the academic community in the country and/or abroad.

### § 3 Curriculum

1. The Curriculum constitutes the basis for designing an individual training program of an interdisciplinary nature for each doctoral student, determined before each semester for the next semester, and agreed with the supervisor or supervisors.
2. The Curriculum of the Doctoral School is presented in the table below:

<b>Name</b>	<b>No. of hours</b>	<b>ECTS credits</b>	<b>Year/semester of education</b>	<b>Learning outcomes</b>
BASIC MODULE	86 h	17	I/1-2, II/4, III/6, IV/8	SzD_W01, SzD_W02, SzD_W03, SzD_W04, SzD_W05, SzD_W06, SzD_W07, SzD_U01, SzD_U02, SzD_U03, SzD_U04, SzD_U05, SzD_U06, SzD_U07, SzD_U08, SzD_U09, SzD_U10, SzD_U11, SzD_K01, SzD_K02, SzD_K03, SzD_K04, SzD_K05, SzD_K06, SzD_K07
LECTURE MODULE	64 h	16	II/3-4, III/5-6	
COMPLEMENTARY MODULE	-	10	I/1-2, II/3, III/5	-
NON-COMPULSARY MODULE	20 h	-	-	-

3. In addition, as part of the Curriculum, doctoral students are obliged to complete:
  - a) professional practical training - up to 60 hours per academic year;
  - b) internship in a selected scientific/research/industrial unit - for a minimum of 2 months (the internship should be completed during the doctoral student's education and cannot be divided into shorter periods).
4. Professional practical trainings can be conducted in the form of teaching classes or participation in their teaching. Setting the number of hours of professional practical training and providing doctoral students with the opportunity to complete it is the task of the University Unit in which doctoral students conduct research related to the preparation of their doctoral dissertation.

5. The doctoral student who, after a positive mid-term assessment, will be employed at the University as an academic teacher in a research-teaching or teaching group for more than half of the full-time equivalent will not have to complete professional practical trainings. In the case of a doctoral student participating in the "Applied Doctorate" program, professional practical training of up to 10 hours/academic year is recommended.
6. In the case of a doctoral student:
  - a) participating in the "Applied Doctorate" program, an internship in the unit where the doctoral student is employed is accepted;
  - b) pursuing education under the agreement referred to in § 4, the internship is accepted in the entity that is a party to the agreement.
7. The content contained in the modules referred to in sec. 2:
  - a) Basic module – covers issues in the field of occupational health and safety, legal aspects, including intellectual property and ethical aspects of scientific activity, transferring the results of scientific activity to the economic/social sphere, economic conditions of science and contemporary civilization challenges, methodology of scientific research in the area of the realized doctoral dissertation with the use of modern methods and tools, improvement of language competences enabling participation in the academic/professional environment and presentation of progress in the realization of the doctoral dissertation, critical analysis and evaluation of research results, planning and implementation of research projects and self-development, preparation for the presentation of results at scientific conferences and preparations for the defence of a doctoral dissertation, communicating on specialist topics to the extent that allows initiating a debate and actively participating in scientific discourse in the national and international scientific community, disseminating the results of scientific activity; courses run as part of the module are obligatory for each doctoral student;
  - b) Lecture module – covers issues related to world achievements, main development trends in scientific disciplines and fundamental dilemmas of modern civilization in the context of scientific research carried out in individual disciplines, as well as the use of knowledge from various fields/disciplines of science to creatively identify, formulate and innovatively solve the research problems raised in the doctoral dissertation; in each semester, two lectures are proposed by specialists in the scientific disciplines in which the Doctoral School provides education, the doctoral student must pass two courses in the discipline in which he/she is educated, and one from outside the discipline;
  - c) Complementary module – covers issues in the field of information skills in science and technology, principles of disseminating the results of scientific activity, methodology of academic teaching, applying for research projects, shaping and improving soft skills, critical assessment of achievements, and own contribution to the development of the discipline activities for self-development and recognition of the importance of knowledge in solving problems, planning and implementing individual and team research projects, also in the international environment, fulfilling social duties of a researcher, maintaining and developing the ethos of research communities; the doctoral student chooses courses that gain and develop his/her individual competences, skills, and knowledge, obtaining a minimum of 10 ECTS credits;
  - d) Non-compulsory module – covers the development and improvement of specialist language competences for doctoral students (English) and/or in the field of knowledge of the Polish language in the case of foreign doctoral students, 20 hours (or 2 x 10 hours).
8. The doctoral student completes courses from the complementary module (in the form of lectures, seminars, classes, workshops, courses, training, summer or winter schools) offered by the Doctoral School or - with the consent of the supervisor - courses offered by University Units, courses from the offer of other doctoral schools /scientific units, including foreign ones, or those run during a scientific internship in a domestic/foreign scientific unit.

9. The Director of the Doctoral School, at a written request of a doctoral student supported by the supervisor, may consider the course as completed and credited outside the Doctoral School, while the doctoral student is obliged to document the completion of the course and achievement of selected learning outcomes as specified in paragraph 2, sec. 3.
10. The Director of the Doctoral School, at a written request of a doctoral student supported by the supervisor, may consider the completion of a part of the individual training program by the doctoral student during a research internship in other research units in the country and abroad, upon presentation of a written certificate from the host institution.
11. If the doctoral student fails to complete the individual training program in a given semester, he or she must complete the missing courses in the next academic year. If they are not completed, the procedure of removing a doctoral student from the register may be initiated.
12. A doctoral student is obliged to document the achievement of all learning outcomes and the fulfillment of other conditions specified in the Curriculum mentioned in § 3 sec. 2 and 3, before submitting the doctoral dissertation.

#### **§ 4 Training in cooperation with another entity**

1. Education at the Doctoral School can be conducted in cooperation with another entity, including a foreign entity, with which Poznan University of Technology has signed an agreement concerning joint education of doctoral students.
2. In the case referred to in sec. 1, an individual training program is determined according to the provisions of the agreement.

#### **§ 5 Final provisions**

The Curriculum comes into force on the day it is passed by the Senate and is valid for doctoral students starting their education at the Doctoral School of Poznan University of Technology from the academic year 2023/2024.