



Results of the ERASMUS+ program's project "NURSLING" for the formation of the National Qualifications Framework of Uzbekistan

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The goal of the NURSLING ERASMUS + project “National Qualifications Framework: A Guide to the Development and Recognition of Qualifications” is the creation of a National Qualifications Framework for Uzbekistan.

The University of Algarve (Faro, Portugal) is coordinator of the project. The project consortium also includes 4 European partners (universities: Koblenz-Landau, Germany; Trento, Italy; Bath-spa, United Kingdom; as well as the World Organization for University Mutual Aid, Austria) and 6 Uzbek educational institutions (National University of Uzbekistan, Tashkent State Technical University, Tashkent University of Information Technologies, Samarkand State University, Center for Development of Higher and Secondary Special and Professional Education, MHSSE of the Republic of Uzbekistan (RUz) and Educational Scientific Industrial Association «Business-Drilling»).

Having studied numerous materials on the development of the European and National Qualification Frameworks represented by partners from Koblenz-Landau, Algarve and Trento , as well as the priority tasks of modernizing the System of Continuous Education (SCE), conducted during the years of independence in the country on the initiative of the President of the RUz, the main provisions of the NURSLING project were defined from two blocks of priority tasks:

- preparation of analytical review of the project;
- development of specific materials for the Project.

The second block defines the specific project activity of the performers:

-Innovative transformations in the system of continuous education in Uzbekistan.- The concept of the General Provision on the Qualification Framework

of the RUz in the system of continuous education of the country officially approved by the MHSSE RUz

- State of the National Council for the Qualification Framework of the RUz
- Composition of the National Council on the Qualification Framework of the RUz.
- Project of the Qualification Framework of Uzbekistan (QF).
- Comparative analysis of the Project of the Qualification Framework of Uzbekistan with the European Qualification Framework (EQF).
- Model of Sectoral Qualification frameworks of Uzbekistan in directions of ICT

The European qualifications framework represents a system consisting of 8 levels , each of which is described in terms of knowledge, skills and competencies. Each level is understood as a level of responsibility, complexity and autonomy. Naturally, one level from another qualitatively differs by its qualifications.

To determine the level of qualification, we analyzed the existing education system in the country and identified the signs of leveling. The following are the signs of the separation of education levels:

- the structure of education in Uzbekistan,
- documents on education and
- complexity of each level in hours.

Based on the analysis of educational documents (for example, the Law of the Republic of Uzbekistan "On Education", the State Educational Standards, the List of directions for the preparation of bachelors, masters, etc.) and by method of discussion of specialists, **8 levels (+2 sublevels)** qualifications were identified (Annex 1).

In Annex 2, the NQF of the RUz compares with the EQF.

Annex 3 contains descriptions of the some items of Higher Education - Bachelor and Magistracy by Dublin descriptors .

Important elements of any NQF for the implementation of the self-certification process are an educational document indicating the level of qualification (such as the European Diploma Supplement) and the system for assessing the learning material (ECTS type). The materials of this type proposed by the project participants: models of the diploma supplement and credit system, the project of the NQF of the RUz were widely discussed in a number of international and national conferences [3].

The proposed model of the project of the NQF of the RUz will be presented for wide discussion at the final Conference of the NURSLING Project , which will be held in April 2019, as the first stage of the 10-step NQF formation process.

Literature

1. Collection of materials. NURSLING “National Qualifications Framework: Guidelines for the Development and Recognition of Qualifications”, (561742-EPP-1-2015-1-PT-EPPKA2-CBHE-SP). v.1, Koblenz-Landau-Tashkent, 2017
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- 3.E.Z.Imamov, A.Karimkhodjaev // National Qualification Framework is the basis for quality assurance and internationalization of higher education // Proceedings of the conference "Introduction of advanced pedagogical and modern information and communication technologies in the educational process of higher educational institutions: practice and prospects". Tashkent 2018, October 25-26, P. 39-44
- E.Z.Imamov, A.Karimkhodzhaev // The need for an internationally recognized “Diploma Supplement” on higher education // *ibid.*, P. 307-311
- E.Z.Imamov, A.Karimkhodzhaev, Sh.Nigmatova, R.A.Imamova // On the method of development of the NQF of SCE RUz // Proceedings of the international conference "Prospects for an intensive approach to innovative development" Namangan 2018, 10-11 July, S. 390-392

Comparison of NQF RUz with EQF

ЕКР EQF	НПК NQF	Виды образования в Узбекистане Types of education in Uzbekistan
1	1	Дошкольное воспитание и образование (ДВиО) Pre-school education and upbringing (PreSchE)
	2	Начальное образование (НО) Primary education (PE)
2		Общее среднее образование (до 9 класса) (ОСО) General secondary education (9 years old schools) (GSE)
3	3	Полное общее среднее образование (ПОСО): Full General secondary education (FGSE): -11 летняя школа, -11 years old school, -Специализированные школы инклюзивного образования (СШИО) -Specialized schools of inclusive education (SSiE)
4	4	Среднее профессиональное образование (СПО): Secondary vocational education (SVE): -профессиональные колледжи II и III типа (ПК-II,III) -professional colleges of II and III types (PC-II,III)
5	4a	Довузовское среднее специальное образование (ДоВССО): Pre-university specialized secondary education(PreUnSSE): -Нулевые подготовительные курсы при вузах(НпК), -Zero preparatory courses at universities (ZpC), -Академический лицей при вузах (АЛ), -Academic lyceum at universities (AL), -профессиональные колледжи I типа на базе бакалавриата (ПК-I) -professional colleges type I based on undergraduate (PC-I) -Специализированные школы одаренных детей (СШоД) - Special schools of gifted children (SSgCh)
	5a	Система переподготовки кадров и повышения их квалификации Образование взрослых In-service training and personnel retraining system Adult education
6	5	ВО-Бакалавриат HE-Undergraduate
7	6	ВО-Магистратура HE- Master's level
8	7	Базовая докторантура Basic Doctorate (eq. PhD)
	8	Докторантура Doctoral - Postgraduate Education

Matching scheme for "knowledge" between the European and Uzbek frameworks of qualifications			
No levels	On the EQF	No levels	On the Uzbek Qualifications Framework
I.	Basic general knowledge	I.	Interest in universal human values through tales and stories
		II.	Has mastered the basic knowledge of disciplines and the facts of training in accordance with the state educational standard (SES) of FSE in the part of primary education.
II.	Basic factual knowledge of a field of work or study		
III.	Knowledge of facts, principles, processes and general concepts, in a field of work or study	III.	knowledge: facts, principles, processes and general concepts of disciplines in accordance with the SES of the FSE; the fundamentals of the sciences, necessary for choosing and acquaintance with the specific features of possible professional activities;
IV	Factual and theoretical knowledge in broad contexts within a field of work or study	IV.	Knowledge: theoretical foundations of educational disciplines, corresponding to SES VSE; knowledge is sufficiently capacious intellectual developed, in-depth, profile, differentiated, professionally-oriented; knowledge of national and universal spiritual values; knowledge of educational, scientific and general cultural; knowledge is sufficient and in-depth for the possible continuation of education in the Bachelor's degree.
V.	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	IV-A	Knowledge: theoretical foundations of educational disciplines, corresponding to SES VSE; knowledge of national and universal spiritual values; knowledge of educational, scientific and general cultural; knowledge is sufficient and in-depth for the possible continuation of education in the Bachelor's degree HE. -cognition, in-depth professional skills, inclinations and skills in the voluntarily chosen additional specialty (profession)
		V-A	Retraining of Knowledge: the theoretical foundations of the academic disciplines that correspond to the SES in the special disciplines of the new direction of the Bachelor's Degree; knowledge on a new direction of the Bachelor's Degree HE corresponding to the level of requirements of approved programs of special disciplines and corresponding textbooks.

			<p>Training knowledge awareness and perception of the most advanced innovative ideas and problems in their field of study. knowledge of the main ideas, problems and ways of their possible solutions within the scope of the study.</p>
VI.	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	V.	<p>Knowledge: the theoretical foundations of educational disciplines, corresponding to the SES directions of the Bachelor's degree in HE; Knowledge and understanding, obtained in the FSE and VSE and necessary in the field of study, are fixed; knowledge corresponds to the level of requirements of approved curricula and related textbooks, knowledge of the comprehension and perception of certain and most advanced ideas and problems in their field of study; knowledge of the main ideas, problems and ways of their possible solutions within the framework of the field of study</p>
VI I.	Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research	VI.	<p>Knowledge and understanding deepening and going beyond the knowledge and understanding of a bachelor; allowing to show originality in the development and application of research ideas; allowing themselves to solve new unfamiliar interdisciplinary problems related to their specialty.</p>
VI II.	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	VII.	<p>Demonstrates knowledge, understanding and the ability to think, design, implement and adapt the current research process with academic integrity; - contributed through the original research in the extension of the knowledge frontier, substantially developed already obtained research results, some of which became the materials of peer-reviewed national and international publications</p>
	<i>Doctor of science - Доктор наук</i> в EQF is absent	VIII.	<p>Demonstrates knowledge, understanding and ability to independently apply their knowledge and systematically understand the problems of their professional sphere; - demonstrated the ability to perceive deeper knowledge, skills and problems of his professional sphere. He has mastered methods of integrating knowledge and methods of solving complex issues, based on limited information and formulating judgments</p>
Matching scheme for "skills" between the European and Uzbek frameworks of qualifications			
№ lev els	On the EQF	№ levels	On the Uzbek Qualifications Framework
I.	basic skills required to carry out simple	I.	Has mastered the need for constant systematic training, combined with family upbringing, learned elements of spiritual and moral development and behavior

	tasks		
		II.	Skills for performing simple tasks and solving similar tasks using simple rules, skill tools that require the use of relevant information.
II.	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools		
III.	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	III.	Possession: cognitive and practical skills necessary for performing tasks and solving problems by selecting and applying basic methods, tools, materials and information in accordance with the SES of the FSE; high level of educational, scientific and general cultural knowledge, spiritual and moral qualities on the basis of national and universal spiritual values.
IV	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	IV.	Ownership: according to the direction of study (humanitarian, agrarian, technical, etc.) voluntarily chosen by them, they are formed at a high level by special professional skills; possession: a sufficiently high level of skills and abilities for self-realization in work; owns the primary knowledge that provides efficiency in elementary professional positions in the chosen specialty
V.	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	IV-A	Possession: at a high level, formed special professional skills in the voluntarily chosen direction of training (humanitarian, technical, agricultural, etc.); possession: at a sufficiently high level of skills and primary knowledge, providing efficiency in elementary professional positions for an additional chosen specialty; possession of a sufficiently high level of knowledge, skills and habits possession: the primary labor skills of the new profession in the self-employment
		V-A	<u>Retraining: is able to find and interpret meaningful data in a new field of study and make social, scientific or ethical generalizations on their basis.</u> <u>In-service training: is able in the field of study to discuss ideas, innovations, problems and solutions, and can discuss them with both specialists and non-specialists...</u>
VI.	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	V.	is able to conduct on their basis social, scientific or ethical generalizations; knows how to develop the necessary knowledge in the field of learning to continue learning with a high degree of autonomy, knows how to discuss ideas, problems and solutions in the field of study with both specialists and non-specialists, and can communicate information.

VI I.	Critical awareness of knowledge issues in a field and at the interface between different fields specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	VI.	knows how to clearly and consistently communicate his findings to specialists and non-specialists and the knowledge and justification used for their formulation; owns deeper skills of his specialty, which allows him to continue to study largely independently and autonomously is able to study areas to collect and interpret meaningful data;
VI II.	the most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice <i>Doctor of science in EQF is absent</i>	VII.	He is able and knows ways of integrating knowledge and solving complex issues, formulating judgments; He can understand the problems of his professional sphere; masterfully owns the methods and skills of research in his scientific field.
		VIII.	He can understand the problems of his professional sphere; masterfully owns methods and skills of research in his scientific field. Freely owns the necessary methods and skills to organize and conduct research, the ability to independently solve new unfamiliar interdisciplinary problems, to develop and apply original research ideas related to his professional field and significantly expand the scope of existing knowledge and understanding.

Matching scheme for " competences " between the European and Uzbek frameworks of qualifications			
No levels	On the EQF	No levels	On the Uzbek Qualifications Framework
I.	work or study under direct supervision in a structured context	I.	He has the skills necessary for successful studies in primary education: to hold a pen, sit at the study table, take the lesson as an obligatory measure
	work or study under supervision with some autonomy	II.	He has skills of work (with some degree of autonomy) and training; He has skills in performing simple tasks and solving similar tasks using simple rules and tools, showing basic cognitive and practical skills; to perceive basic educational, scientific and general cultural knowledge, spiritual and moral qualities on the basis of national and universal spiritual values.
III.	take responsibility for completion of tasks in work or study; adapt own behaviour to circumstances in solving problems	III.	Owns the qualification, corresponding to the level of requirements of the SES of the FSE.
IV	exercise self-management within the guidelines of work or study contexts that are	IV.	Owns the qualification, corresponding to the level of requirements of the SES of the VSE: - Deepened theoretical knowledge of the academic disciplines, corresponding to the SES of

	usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities		the VSE: -developed profound professional skills, inclinations and skills in one or several voluntarily chosen specialties (professions); -were sufficiently competent possession of professional skills and skills, the possession of the relevant tool base of his profession
V.	exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others	IV-A	Has additional qualification, corresponding to the level of requirements of the organization for employment and corresponding to the level of requirements presented to the applicant; - in accordance with the requirements necessary for the possible continuation of training in the Bachelor's Degree, in-depth knowledge, understanding and understanding of knowledge - knowledge that provides a basis for work in this field (or area of one's vocation); - Demonstrated the availability of primary knowledge, ensuring the release of working capacity in elementary professional positions in this area of training, as well as further successful training in vocation or personal development
		V-A	Retraining Has a qualification that corresponds to the level of requirements of the SES of the new direction of the bachelor's program. A wide range of cognitive and practical skills are needed to develop creative solutions to abstract problems in the new direction of the Bachelor's program. Improving the Qualification of new innovative skills in the application of knowledge and understanding, the ability to form and substantiate arguments and solve problems within the scope of the study
VI.	manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups	V.	Has a qualification that corresponds to the level of requirements of the SES of the Bachelor's Degree assimilated production standards and legal framework for employment a wide range of cognitive and practical skills necessary for developing creative solutions to abstract problems / problems the evidence of high professionalism and competence in labor activity is the assimilation of the skills of applying knowledge and understanding, the skills of forming and substantiating arguments and solving problems within the scope of the study area
VII.	manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of	VI.	The Master's Degree of HE is oriented to the formation of a new generation of cadres with a high general and professional culture, research skills, creative and social activity, the ability to independently orient themselves in social and political life, capable of posing and solving problems for the future. Upon completion of the master's program, the graduate is able to: - to master the latest achievements of the theory, to study the methods and methods of their

	teams		<p>study and independently interpret them;</p> <ul style="list-style-type: none"> - Carry out a critical assessment and interpretation of the achievements of theory and practice; -to apply methods of conducting independent research and interpretation of their results; <p>To demonstrate originality and creativity in carrying out activities in a specific field; master advanced skills, demonstrating the skill and innovation needed to solve complex and unpredictable problems in the specialized field of work;</p> <ul style="list-style-type: none"> - responsibility for the management of the professional development of individuals and groups.
VIII	<p>demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research</p> <p><i>Doctor of science – in EQF is absent</i></p>	VII.	<p>post-graduate education is aimed at ensuring the needs of the society in scientific and scientific-pedagogical personnel of the highest qualification, satisfaction of creative educational and professional interests of the individual.</p> <p>"PhD-Doctor philosophy - Doctors of Philosophy" can:</p> <ul style="list-style-type: none"> - communicate in their professional sphere with experts, a large academic community and with society in general; -promote into society within academic and professional contexts, technological, social or cultural knowledge; -critically comprehend the issues in the field of study and in related fields; - to manage and modify the contexts of work that require new unpredictable strategic approaches
		VIII.	<p>Post-graduate education is aimed at ensuring the needs of the society in scientific and scientific-pedagogical personnel of the highest qualification, and is also aimed at the intellectual filling and development of the research process.</p> <p>"Doctor of science - Doctor of Science" can:</p> <ul style="list-style-type: none"> - To promote, within academic and professional contexts, technological, scientific, social or cultural development in the interest of building a knowledge-based society; - communicate on the subject of their field and competence with peers of equal status, as well as the broad scientific community and society; -bring up a new generation of researchers who are able to continue and further develop the research begun; original and creative research, - show, if necessary, high authority, autonomous and innovative thinking, scientific and professional qualities, as well as a firm commitment to developing new ideas or processes in various advanced fields, including research.

GENERAL DUBLIN DESCRIPTORS OF THE UNIVERSITY LEVELS
BACHELOR

Knowledge and understanding		Applying knowledge and understanding		Ability to express judgment and ability to learn		Communicative skills and abilities		Ability to further education and professional communication skills	
include certain aspects related to the most advanced ideas in their field of education and are supported by regularly approved textbooks; (including at the level of textbooks of increased complexity), theoretical provisions and principles for solving practical problems, sufficient to perform labor functions independently or in a team, and also for the possible continuation of training to achieve the next level of qualifications; skills and principles of solving practical problems, the most important prospective problems and the main theoretical provisions of their field of education.		- is reached by forming and substantiating arguments, - is reached at the level of their knowledge and understanding and is realized on the basis of a professional approach to work or their occupation.		- the ability to collect and interpret meaningful data; - in professional activity, the skills of independent study and assimilation of information, increasing the level of their knowledge and skills; - Owning the skills of independent study and assimilation of information, raising the level of professional knowledge and skills.		- Communicate information, ideas, problems and solutions; - to feel responsible for the result of the work at the level of a department or organization; - to carry out an independent professional activity, presupposing the setting of goals, tasks of their own work and subordinates.		the skills necessary to continue learning with a high degree of autonomy (based on self-education); - the ability to convey information, ideas, problems and their solutions to an audience consisting of both specialists and non-specialists; - the ability to perceive criticism and the arguments of colleagues, it is understandable and unambiguous to explain to colleagues and management the meaning of the tasks and problems to be solved, their own conclusions and justifications.	
<i>Learning Outcome</i>	<i>Competencies</i>	<i>Learning Outcome</i>	<i>Competencies</i>	<i>Learning Outcome</i>	<i>Competencies</i>	<i>Learning Outcome</i>	<i>Competencies</i>	<i>Learning Outcome</i>	<i>Competencies</i>
Demonstration of knowledge and understanding of its direction of education, formed on the basis of general secondary education; - mastering skills and understanding the principles of solving practical problems,	- the extension and deepening of knowledge to the bachelor's level was achieved through the possession of skills and understanding of the principles of	-apply their knowledge and understanding in a way that attests to a professional approach to work or to a profession, - to have competence demonstrated through the	instrumental skills	- to collect and interpret information for the development of judgments, taking into account social, ethical and scientific considerations	-developed system skills and ability to learn	- the collection and interpretation of information for the development of judgments, taking into account social, ethical and scientific considerations, -Demonstration of knowledge and understanding of their direction of	- communicative and system skills and the ability to learn.	- To possess skills in the field of training, necessary for continuing education with a high degree of autonomy (on the basis of self-education);	- developed system skills

<p>-knowledge and understanding of the main theoretical positions of their direction of education, -to understand and understand the most important, problematic and long-term objectives of their education.</p>	<p>solving practical problems, as well as knowledge and understanding of the main theoretical positions of the studied direction of education.</p>	<p>formation and substantiation of arguments and solving problems in the field of study.</p>		<p>Demonstrate knowledge and understanding of their direction of education, formed on the basis of general secondary education, and incorporating certain aspects related to the most advanced knowledge of their field of education.</p>		<p>education, formed on the basis of general secondary education, and incorporating certain aspects related to the most advanced knowledge of their field of education, - The ability to communicate information, ideas, problems and solutions, both to specialists and non-specialists.</p>			
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Result of study: bachelor Qualifications are awarded to students who:

demonstrated knowledge and understanding in the field of education, which relies on their general knowledge of pre-university training, and are typical for this level, supported by advanced textbooks, including some aspects that reflect basic knowledge of the field of activity of the chosen field of education;
 can apply their knowledge and understanding in ways that show a professional approach to their work or vocation, and have the typical competencies demonstrated through finding and building arguments in solving problems within their field of education;
 have the ability to collect and interpret relevant data (usually within the area of their education) to develop judgments that are reflected in relevant social, scientific or ethical issues;
 can communicate information, ideas, problems and solutions to viewers, professionals and laymen;
 They developed the skills they acquired during training, which are necessary for their further training with a high degree of autonomy.

GENERAL DUBLIN DESCRIPTORS OF THE UNIVERSITY LEVELS
MASTER

	Knowledge and understanding		Applying knowledge and understanding		Ability to express judgment and ability to learn		Communicative skills and abilities		Ability to further education and professional communication skills	
	Learning Outcome	K1	Learning Outcome	K2	Learning Outcome	Competencies 3	Learning Outcome	Competencies 4	Learning Outcome	Competencies 5
Magistrate	<p>Within the scope of the research dissertation, as well as a block of special disciplines and a block of disciplines for the choice of their specialty, the master must be able to demonstrate:</p> <ul style="list-style-type: none"> - Advanced knowledge and understanding in the field of their specialty, necessary for innovative research, relying on a critical understanding of theories and principles; -critical understanding of the theory and principles of their professional field; -knowledge and understanding of certain problem problems and perspective directions of development of their specialty; -understanding of the innovative nature of their research on the basis of critical reflection on advanced knowledge, theories and principles of the specialty, as well as its problems; 		<p>The application of knowledge and understanding is achieved in the process:</p> <ul style="list-style-type: none"> - the solution of new and unfamiliar problems, both in the context of researching their specialty in their field, and within the framework of broader interdisciplinary contexts; - independent analysis of assigned tasks, methods and results of their solution; - solving critical problems in research and innovation, allowing to expand and rethink existing knowledge or professional practice; mastering the most advanced and specialized skills and technologies; - Evaluation of the current problems of research, drawing up plans for scientific and research activities; - implementation and conduct of research in accordance with academic criteria for methodological, research and project problems related to the development and improvement of efficiency 		<p>the ability to collect and interpret meaningful data;</p> <ul style="list-style-type: none"> -in professional activity, as an independent study and assimilation of information, raising the level of knowledge and skills, and skills of integrating knowledge and solving complex issues and formulations, judgments based on incomplete or limited information; at the national or international levels, the ability to publish deserving results of their research; - ability to determine the strategy of managing complex social, industrial and scientific processes. <ul style="list-style-type: none"> • -owning skills • training, necessary for further education in order to achieve a greater degree of independence in professional activity, as well as for independent professional career development; training that allows them to continue their education in professional or related fields; expanding the boundaries of knowledge with original research, contributing to the further development of the subject of research; <ul style="list-style-type: none"> • critical analysis, mastering and generalization of information in professional and related fields of activity; • expanding the boundaries of 		<p>With the support of a critical understanding of theory and principles, it has advanced knowledge in the field of research (or vocational training) necessary for research (or innovation work). He knows the theoretical bases, principles and methods of solving scientific and practical problems in the field of vocational training, creating the foundation for the expression of originality in solving complex problems and problems, can apply knowledge and put forward ideas.</p>		<p>Skills and skills of the specialty, the ability to express judgments is manifested in the ability:</p> <ul style="list-style-type: none"> • integrate knowledge and cope with complex issues, in the ability to formulate judgments based on incomplete or limited information; <ul style="list-style-type: none"> • • laconically and professionally present to the general public information about the essence of the problem being solved, the results of its work and conclusions; • clearly and clearly convey their findings to specialists and laymen; free and open communication with colleagues and the public, as well as to the perception of criticism; authoritatively present and discuss matters in their professional field with experts and society, with a wide range of academic community, including students; in a simple and accessible form for the general audience to convey the essence of complex issues and problems, to present the original ways of solving them; 	

<p>- knowledge and understanding of the skills of solving the main theoretical positions, individual problematic and practical problems of the studied area.</p>		<p>complex social, industrial, scientific problems.</p>		<p>knowledge with original research; autonomous and independent research and innovation activities in professional and related fields.</p>				<p>in an accessible and open form, to introduce a free exchange of views in professional and related fields of activity; briefly and accurately state and demonstrate the issues, problems and original ways of their solution in professional and related fields of activity.</p>											
<p>- have the skills to solve practical problems, understand the principles of solving practical problems, -to understand and understand the main theoretical positions of the chosen direction of education, -know and understand the most important, problematic and promising задачи</p>		<p>- expansion of system and advanced knowledge in the basic professional field of activity and research; - understanding of the principles and methods of scientific and creative activity; -were acquired knowledge and understanding of theoretical foundations, principles and methods of solving practical and scientific tasks in the field of vocational training; a foundation of knowledge and understanding for original solutions to complex</p>		<p>independently analyze the assigned tasks, choose methods for their solution, analyze the results of professional activity; apply their special knowledge and abilities to solve complex problems and problems in a new or unfamiliar environment in a broad and interdisciplinary context; to evaluate the urgency of the problem of research, to compile and provide a plan for its implementation, to conduct a scientific research process in accordance with academic criteria; to expand and re-think existing knowledge and professional practice on the basis of the most advanced and specialized skills and technologies; to solve problems of a methodological, project and research nature related to the</p>		<p>- Assimilated research skills and innovative approach.</p>		<p>- the collection and interpretation of information for the development of judgments, taking into account social, ethical and scientific considerations - Demonstration of knowledge and understanding by specialty, formed on the basis of bachelor's higher education and including specific aspects and the most advanced knowledge of their specialty.</p>		<p>- systemic and research skills and ability to self-professional work are developed.</p>		<p>- demonstration: • advanced knowledge in the field of research (or training) required for research (or innovation); • (based on a critical understanding of theory and principles) of advanced knowledge in the field of research (or vocational training) required for research (or innovation); • knowledge and understanding of the theoretical foundations, principles and methods of solving scientific and practical problems in the field of vocational training, creating the foundation for manifesting originality in solving complex problems and problems, and for applying and</p>		<p>- developed research capabilities and developed analytical skills.</p>		<p>It is able to integrate knowledge and cope with complex issues, professional specialists and non-specialists present information, the essence of the problem being solved, the result of their work and conclusions. Is able to briefly and accurately state and demonstrate questions, problems and original ways of solving them in their specialty, professional activity, as well as in related fields.</p>		<p>Professional communication skills, critical analysis, assessment skills and synthesis of new and complex ideas.</p>	

	своей специальности.	problems and problems in the context of research.	development and enhancement of the effectiveness of complex social, industrial and scientific processes; identify and develop a strategy for managing complex scientific, production and social processes.				promoting ideas.			
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Learning outcomes: Master Qualifications are awarded to students who:

demonstrated knowledge and understanding that are based on both the expanded and / or increased volume typically associated with undergraduate and that provide the basis or opportunity to bring novelty to the development and / or application of ideas, often within the context of the study;

can apply their knowledge and understanding by solving the problem in a new or unfamiliar environment within the wider (or multidisciplinary) context associated with their field of study;

can combine knowledge and complex practice, and formulate judgments based on incomplete or limited information, which also reflects social and ethical responsibilities related to their knowledge and judgments;

they can communicate their conclusions and their knowledge and explanations to the viewers, specialists and non-specialists clearly and unambiguously;

have learning skills that allow them to continue their studies in a manner that can be largely self-directed or autonomous.