

CONTENT OF THE EDUCATIONAL PROGRAM

№	Code and name of modules	Total credits by module	№	Name of subject and code	Credits by subjects	Cycle/component
1	ORW-1 Organization of research work	9	1	ORW 701 Academic writing	4	CC/UC
			2	ORW 702 Methods of scientific research	5	CC/UC
2	IS-2 Integration of science	16	1	IS 701 History and philosophy of geographical science	6	MC/UC
			2	IS 702/1 Commercialization of research and development	5	MC/OC
			3	IS 702/2 Modern paradigm of geographical education		
			4	IS 703/1 Remote sensing in geographical research	5	MC/OC
			5	IS 703/2 International relations and geopolitics	5	MC/OC
3	PT-3 Professional training	10	1	PT 801 Pedagogical practice	10	UC/CC
		10	2	PT7(8)02 Research practice	10	MC/CC
		123	3	PT7(8,9) 031 Doctoral student research work, including internship and doctoral dissertation DSRW	112	DSRW
			4	Methods of scientific research	2	
			5	Intensive courses	9	
4	FC Final certification	12	1	FE 901 Writing and defense a doctoral dissertation	12	FC
TOTAL:		180			180	

2.1. DESCRIPTION MODULES AND DISCIPLINES

ORW – 1 Organization of research work							
<i>Module description:</i> This module assumes the development of methods and technologies of research work using modern digital resources. The pedagogical practice of the module is aimed at involving the doctoral student in the teaching or teaching and methodological activities of the department to which he is attached, allows him to strengthen practical training in these areas and acquire the necessary practical skills for the competent organization and implementation of teaching and (or) teaching and methodological work.							
№	Name of subject and code	Cycle/ component	Credits	Subject disruption	Teaching methods	LO by EP	Assessment methods
1	ORW 701 Academic writing	CC/UC	4	The discipline is aimed at developing the skills of writing various scientific texts (scientific article, report, reviews, literary review, article based on empirical data, etc.), comprehensive mastery of their features and structures. The course covers all the problems that a doctoral student faces in the process of writing an article, starting with the choice of a topic and ending with its publication. In the course of studying the discipline, doctoral students improve such skills as critical thinking, systematization of writing, scientific discourse, critical reading, analysis, evaluation, etc. They get acquainted with the structure and styles of scientific articles in highly rated journals of international level.	Empirical method, problem-based search method	LO 1, LO 2, LO 9, LO 10	Written
2	ORW 702 Methods of scientific research	CC/UC	5	The discipline examines the basic concepts of research work, scientific methods of research, the validity of the choice of groups of methods in conducting various studies, general scientific, formal-logical, interdisciplinary research methods in the field of subject research, the main problems of research practice. The discipline forms the skills of using research methods in the field of subject research.	Empirical method, problem-based search method	LO 1, LO 2, LO 7, LO 9, LO10	Written

IS-2 Integration of science

Module description: The content of the module highlights in detail the issues necessary to understand the essence of research work and methods of its implementation, reveals the basic concepts and categories of scientific search, describes the methodological principles of scientific search. A large place in the study of the module is occupied by the basics of modern information and bibliographic culture, methods, methods and means of obtaining, storing, processing information. The study of the module's disciplines is designed to familiarize doctoral students with the organization of scientific knowledge and research, to prepare them for conducting their own research and writing dissertations..

№	Name of subject and code	Cycle/component	Credits	Subject discription	Teaching methods	LO by EP	Assessment methods
1	IS 701 History and philosophy of geographical science	MC/UC	6	VII-VI century BC Greek colonies in Ancient Greece and VII century BC in East Asia. Works on geography by Galileo Galilei, Eratosthenes, Strabo, Ptolemy in the XVI-XVII centuries. The role of Arab and Otrar scientists in the development of natural science. Classical science that developed before the twentieth century: statism, elementarianism, anti-evolutionism. Religion and philosophy in the worldview. The study of the territory of Kazakhstan and the works of domestic scientists. The Infinite World: modern astrophysical, cosmological concepts.	Empirical method, problem-search method	LO 3, LO 4, LO 9, LO 11	Written
2	IS 702/1 Commercialization of research and development	MC/OC	5	Principles and forms of organization of scientific and technical activity, its results, the content of the concepts of technology and technology transfer. The content of the main methods for assessing the commercial potential of pedagogical technologies, its usefulness and potential cost. Stages of commercialization of the results of scientific research, models of commercialization of the results of scientific and pedagogical research. Protection of intellectual property objects and rights to their use in the process of commercialization of the results of scientific and pedagogical research. Theoretical and methodological aspects of building a business plan for commercialization of the results of scientific research and pedagogical developments. Technology transfer. Interaction with government agencies, companies, scientific organizations.	Empirical method, problem-search method	LO 2, LO 3, LO 6, LO 7, LO 8	Written
	IS 702/2 Modern paradigm of geographical education			The main goals and objectives of the global and regional forecast. Interrelation and interdependence of processes and phenomena in the environment. Methods and ways of environmental impact assessment. The study of the	Empirical method, problem-search method	LO 5, LO 7, LO 8, LO 10, LO 11	Written

				relationship of geographical objects with the environment. Environmental monitoring. Forecasting of changes in natural and geotechnical systems. Types of geographical forecasts. The importance of geographical forecasting in the rational use and protection of environmental resources. Socio-ecological forecast, its main directions. Methodology of ecological and geographical forecasting.			
3	IS 703/1 Remote sensing in geographical research	MC/OC	5	The role and types of spacecraft in the study of geographical science and the role of space technologies. Functions and features of spacecraft. Methods of using Earth remote sensing data. Methods of decoding satellite images. Modern geoinformation technologies and features of their use in solving problems of geographical science.	Empirical method, problem-search method	LO 2, LO 3, LO 7, LO 10	Written
	IS 703/2 International relations and geopolitics			International economic integration. International division of labor. The main forms of international economic relations. Features of the economy of developed and developing countries. The role of Kazakhstan in the system of international relations. Global problems of the world economy and directions of their joint solution. Geopolitical zones of the world. Formation of the political and geographical structure of Europe, Asia, Africa, Australia, oceanic islands and America. Global and regional political problems. The activities of international organizations for the preservation of peace.	Empirical method, problem-search method	LO 3, LO 4, LO 8, LO 9, LO 10	Written

PT – 2 Professional training

Module description: The module examines the performance of a doctoral student's research work on their subject using modern methods of scientific research, based on modern theoretical, methodological and technological achievements of science and practice. The module considers the passage of a scientific internship in order to get acquainted with innovative technologies and new types of production, conduct scientific and experimental research in scientific organizations and / or organizations of relevant industries or fields of activity in the country or abroad.

№	Name of subject and code	Cycle/component	Credits		Subject discription	Teaching methods	LO by EP	Assessment methods
1	PT 801 Pedagogical practice	UC/CC	5		Development of creative potential, development of scientific and methodological knowledge in pedagogical practice and adaptation to the requirements of the international labor market; to consider the main directions and development of doctoral students in the modern education system;	Educational process	-	Report
2	PT 801 Pedagogical practice	UC/CC	5		Development of creative potential, development of scientific and methodological knowledge in pedagogical practice and adaptation to the requirements of the international labor market; to consider the main directions and development of doctoral students in the modern education system;	Educational process	-	Report
3	PT702 Research practice	MC/CC	5		Development of creative potential, development of scientific and methodological knowledge and adaptation to the requirements of the international labor market; to consider the main directions and development of doctoral students in the modern education system;	Practical work	-	Report
4	PT802 Research practice	MC/CC	5		Development of creative potential, development of scientific and methodological knowledge and adaptation to the requirements of the international labor market; to consider the main directions and development of doctoral students in the modern education system;	Practical work	-	Report
5	PT703 Doctoral student research work, including internship and doctoral dissertation DSRW	DSRW	3	5	Research work is carried out aimed at developing the ability of doctoral students to make their own theoretical and practical conclusions. The formation of one's own opinion forms the skill of an objective assessment of scientific information, the ability to integrate interdisciplinary knowledge into a free scientific search. Examines the ways of applying scientific knowledge in educational activities, discusses them in the scientific community.	Practical work	-	Report

	Methods of scientific research		2		The discipline "Methods of scientific research", carried out in order to provide the student with the information necessary for effective writing of scientific research work, carries out a comprehensive analysis of various scientific texts, starting with the concept of research. The analysis of research works is carried out, focusing on the writing of their methodology section. The doctoral student is given the opportunity to develop a research plan that he considers appropriate, combining the experience and knowledge gained up to this stage in his field of research. In addition, detailed information is provided on the set of studies that are included in the design of the research work. This contributes to the systematic recording of the doctoral student's research work and informing about other methods of scientific research. It will also improve knowledge about the information necessary for the course of the research process, such as the use of quantitative, qualitative, mixed research methods, ways of collecting data, research ethics, data analysis.			
6	PT7(8,9) 03 Doctoral student research work, including internship and doctoral dissertation DSRW	DSRW	20	25	Research work is carried out aimed at developing the ability of doctoral students to make their own theoretical and practical conclusions. The formation of one's own opinion forms the skill of an objective assessment of scientific information, the ability to integrate interdisciplinary knowledge into a free scientific search. Examines the ways of applying scientific knowledge in educational activities, discusses them in the scientific community.	Practical work	-	Report
	Intensive courses		5		The course aimed at developing the skills of writing various scientific texts (scientific article, report, reviews, literary review, article based on empirical data, etc.), comprehensive mastery of their features and structures. The course covers all the problems that a doctoral student faces in the process of writing an article, starting with the choice of a topic and ending with its publication. In the course of studying the discipline, doctoral students improve such skills as critical thinking, systematization of writing, scientific discourse, critical reading, analysis, evaluation, etc. They get acquainted with the structure and styles of scientific articles in highly rated journals of international level.			

7	Doctoral student research work, including internship and doctoral dissertation DSRW	DSRW	18	20	Research work is carried out aimed at developing the ability of doctoral students to make their own theoretical and practical conclusions. The formation of one's own opinion forms the skill of an objective assessment of scientific information, the ability to integrate interdisciplinary knowledge into a free scientific search. Examines the ways of applying scientific knowledge in educational activities, discusses them in the scientific community.	Practical work	-	Report
	Intensive courses		2		The course aimed at developing the skills of writing various scientific texts (scientific article, report, reviews, literary review, article based on empirical data, etc.), comprehensive mastery of their features and structures. The course covers all the problems that a doctoral student faces in the process of writing an article, starting with the choice of a topic and ending with its publication. In the course of studying the discipline, doctoral students improve such skills as critical thinking, systematization of writing, scientific discourse, critical reading, analysis, evaluation, etc. They get acquainted with the structure and styles of scientific articles in highly rated journals of international level.			
8	Doctoral student research work, including internship and doctoral dissertation DSRW	DSRW	23	25	Research work is carried out aimed at developing the ability of doctoral students to make their own theoretical and practical conclusions. The formation of one's own opinion forms the skill of an objective assessment of scientific information, the ability to integrate interdisciplinary knowledge into a free scientific search. Examines the ways of applying scientific knowledge in educational activities, discusses them in the scientific community.	Practical work	-	Report
	Intensive courses		2		The course aimed at developing the skills of writing various scientific texts (scientific article, report, reviews, literary review, article based on empirical data, etc.), comprehensive mastery of their features and structures. The course covers all the problems that a doctoral student faces in the process of writing an article, starting with the choice of a topic and ending with its publication. In the course of studying the discipline, doctoral students improve such skills as critical thinking, systematization of writing, scientific discourse, critical reading, analysis, evaluation, etc. They get acquainted with the			

				structure and styles of scientific articles in highly rated journals of international level.			
9	Doctoral student research work, including internship and doctoral dissertation DSRW	DSRW	30	Research work is carried out aimed at developing the ability of doctoral students to make their own theoretical and practical conclusions. The formation of one's own opinion forms the skill of an objective assessment of scientific information, the ability to integrate interdisciplinary knowledge into a free scientific search. Examines the ways of applying scientific knowledge in educational activities, discusses them in the scientific community.	Practical work	-	Report
10	Doctoral student research work, including internship and doctoral dissertation DSRW	DSRW	18	Research work is carried out aimed at developing the ability of doctoral students to make their own theoretical and practical conclusions. The formation of one's own opinion forms the skill of an objective assessment of scientific information, the ability to integrate interdisciplinary knowledge into a free scientific search. Examines the ways of applying scientific knowledge in educational activities, discusses them in the scientific community.	Practical work	-	Report
11	Final Certification	FE	12	Writing and defense a doctoral dissertation			

