Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
NAMED AFTER PATRICE LUMUMBA
RUDN University

Institute of Environmental Engineering
educational division (faculty/institute/academy) as higher education programme developer

Approved at the meeting of the Academic Council of RUDN University
Protocol No.10
May, 20, 2024
(month, date, year)

Opened by order of the Rector of RUDN University No. 299

June, 04, 2024
(month, date, year)

PROFESSIONAL EDUCATION PROGRAMME OF HIGHER EDUCATION

Field of Studies/ Speciality:

05.04.06 Ecology and Nature Management
field of studies / speciality code and title

Profile/Specialisation:

Climate Project Managent
higher education programme title

The Educational Programme is developed in compliance with:
Educational Standard of RUDN University, approved by Order of the Rector No. 371 dated May 21, 2021
(month, day, year)

Level of education:

master's
(bachelor's / specialist's / master's – to fill in the required)

Graduate's Qualification:

Master
(graduate's qualification in compliance with the order of the Ministry of Education and Science of Russian Federation dated September 12, 2013, No. 1061)

Length of Educational Programme:

2 years	-	-
(full-time education)	(part-time education)	(correspondence education)

Information about the specific features of the programme: it is implemented in English.

AGREED by:

Head of Educational Programme	Chairperson of Didactic Council	Head of Educational Department
E.V. Savenkova	M.D. Kharlamova	E.V. Savenkova
(signature)	(signature)	(signature)
(month, date, year)	(month, date, year)	(month, date, year)

2026

EDUCATIONAL PROGRAMME DESCRIPTION

1. EDUCATIONAL PROGRAMME GOAL (MISSION)

The mission of the Educational Programme «Climate Project Management» (in English) is a highly qualified specialist training in the field of greenhouse gases management, using innovative programs and new distance learning technologies that guarantee a master's degree graduate high competitiveness in the international labor market.

The overall goal of the Educational Programme « Climate Project Management» (in English) is to provide the professional education in the field of greenhouse gases management, which allows the graduate to work successfully in the chosen activity field, to possess general cultural, professional and special competencies that contribute to the graduate social mobility and sustainability in the labor market, as well as preparing graduates for self-study and continuous professional self-improvement.

The purpose of the Educational Programme «Climate Project Management» (in English) is graduates' social and personal qualities formation, contributing to the development of general cultural needs, creative abilities, social adaptation, communication, tolerance, perseverance in achieving goals.

2. EDUCATIONAL PROGRAMME RELEVANCE, SPECIFICITY, AND UNIQUENESS

Relevance. The programme "Climate Project Management" has been developed in response to global and national challenges associated with climate change. In accordance with the Climate Doctrine of the Russian Federation (Presidential Decree No. 812 of 26 October 2023) and the Federal Scientific and Technical Programme in the Field of Environmental Development and Climate Change for 2021–2030 (Government Decree No. 133 of 8 February 2022), one of the priority objectives is the training of personnel for the development and implementation of measures aimed at climate change adaptation, reduction of greenhouse gas emissions, and transition to a low-carbon economy.

Specificity. The programme is delivered entirely in English (all courses, internships, and final state certification), which enables graduates to work in international projects and organisations. The programme has a practice-oriented nature, as it includes industrial, research, and pre-graduate internships based at leading partner organisations (Ministry of Natural Resources and Environment of the Russian Federation, Federal Accreditation Service (Rosaccreditation), National Institute of Accreditation, Baromembrane Technologies LLC, Rusatom Overseas JSC,

Mosoblgaz JSC, RN-Yuganskneftegaz LLC, Federal State Budgetary Institution "VNII Ecology", Joint Institute for High Temperatures of the Russian Academy of Sciences, and others).

Uniqueness. The programme draws upon the existing greenhouse gas validation and verification body established at RUDN University, which allows students to undertake internships and participate in real-world validation and verification procedures of climate projects.

3. LABOUR MARKET NEEDS FOR PERSONNEL TRAINING IN EDUCATIONAL PROGRAMME PROFILE

Climate change has irreversible impacts on human and natural systems and cause the the sustainable development risks. To minimize these risks, it is necessary to adapt the spheres of public administration, economic sectors and regional infrastructure to changing climatic conditions.

The impact of climate change is complex and creates significant risks, primarily for the population, national infrastructure and climate-sensitive sectors of the economy. Among the most significant are the risks of extreme weather events (for example, large-scale floods or drought events), the risks of combined adverse impacts (for example, high temperatures and high levels of air pollution) and the risks of degradation of various ecosystems due to changes in thermal and humidity conditions (for example, degradation of permafrost and mountain glaciation, accelerated aging of buildings).

According to the Climate Doctrine of the Russian Federation, approved by Decree of the President of the Russian Federation No. 812 of October 26, 2023, the development and implementation of operational and long-term measures to adapt the population, economy and environment to the adverse effects of climate change are the main objectives of climate policy. Scientific, information and personnel support for the development and implementation of measures for adaptation and mitigation of anthropogenic impact on the climate are one of the main directions for the implementation of climate policy.

According to to Decree of the President of the Russian Federation dated February 8, 2021 No. 76 “On measures to implement state scientific and technical policy in the field of environmental development of the Russian Federation and climate change”, it was developed and approved by Decree of the Government of the Russian Federation dated February 8, 2022 No. 133 “Federal Scientific and Technical program in the field of environmental development of the Russian Federation and climate change for 2021 - 2030", providing for the creation of high-tech technological solutions aimed at studying climate, mechanisms of adaptation to climate change

and their consequences, to ensure sustainable and balanced socio-economic development of the Russian Federation.

Order of the Ministry of Economic Development of Russia dated May 13, 2021 No. 267 approved Methodological recommendations for assessing climate risks, as well as Methodological recommendations for the formation of industry, regional and corporate plans for adaptation to climate change.

Taking into account the coverage of all industries and regions, the need for specialists in the field of climate change, whose qualifications are aimed at studying climate, planning activities, developing mechanisms for adaptation to climate change and its consequences, and ensuring sustainable and balanced socio-economic development of the Russian Federation during the period of climate change, is estimated at no less than 40 thousand people.

Master's program graduates are highly qualified specialists who will be able to work effectively at large industrial enterprises, in higher educational institutions, work on climate project management.

Potential consumers of graduates of the educational program are:

- regional and international organizations which are involved in the functioning of carbon credits markets;
- GHG validation and verification bodies;
- municipal and regional structures carrying out activities for the environment and natural resources protection;
- industrial enterprises of different forms of ownership, laboratories for environmental protection, labor protection;
- municipal and regional structures carrying out activities in the field of production and consumption waste management;
- research organizations and centers whose activities are related to the development and improvement of innovative technologies on carbon capture and storage;
- public and international organizations related to carbon neutrality achievement.

4. SPECIAL REQUIREMENTS FOR POTENTIAL APPLICANTS

Applicants who have the first higher education in the master's program profile and who wish to improve their professional level and acquire additional competencies can enter the educational program. Also, it is possible to enroll applicants with non-core education in related fields (economics, law, etc.).

Applicant must have the appropriate competencies to Educational Programme «Climate Project Management» (in English:

- have English level not lower than Intermediate;
- own a culture of thinking, the ability to generalize, analyze, perceive information, set a goal and choose ways to achieve it;
- be aware of the future profession social significance, have a high motivation to perform professional activities, the ability to find professional solutions, including in non-standard situations, and the willingness to bear responsibility for them;
- be ready to perform professional functions working in a team;
- have basic fundamental training in the field of natural sciences and mathematics,
- be able to apply information technology to solve technical problems,
- be able to use (read) graphic and cartographic documentation;
- be able to navigate the techniques and technologies for protecting the environment and humans from technogenic hazards, to promote the goals and objectives of ensuring the safety of humans and the natural environment in the technosphere;
- know the standards for the levels of permissible negative impacts on humans and the natural environment;
- understand technical documentation related to technological processes;
- be able to read and understand specialized technical literature;
- have experience in participating in research projects in the training field;
- be able to systematize scientific information, process the received data.

5. FEATURES OF EDUCATIONAL PROGRAMME IMPLEMENTATION

5.1. Educational Programme «Climate Project Management» (in English) is implemented with elements of distance learning technologies (TEIS, MOOC, lectures / seminars on the Yandex Telemost Platform).
5.2. The language of the Educational Programme «Climate Project Management» implementation is English.
5.3. If necessary, the educational program for higher education may be adapted to accommodate individuals with disabilities and persons with limited health capacities. The e-learning components and distance learning technologies used in the education of such individuals are designed to enable the receipt and transmission of information in forms accessible to them.
5.4. Educational Programme Climate Project Management» (in English) is implemented by Federal State Autonomous Educational Institution of Higher Education "Peoples' Friendship University of Russia named after Patrice Lumumba".

The information about partner organization involved in the Educational Programme implementation:

Name of organization/enterprise	**Interaction functionality**
Jospong Group (Ghana)	Industrial Partner

5.5. The information on the planned introductory/advanced field internships and (or) research & development internships

Internship	**Internship location** *(organisation name and location)*
Pre-graduate Internship	Ministry of Natural Resources and Environment, Department of International Cooperation and Climate Change
Pre-graduate Internship	Federal Service for Accreditation, Moscow
Pre-graduate Internship	Federal Autonomous organization "National Institute of Accreditation", Moscow
Pre-graduate Internship	GHG Validation and Verification Body of RUDN University, Moscow
Pre-graduate Internship	LLC «Baromembrane technologies», Vladimir
Industrial Internship	GHG Validation and Verification Body of RUDN University, Moscow
Industrial Internship	LLC «Baromembrane technologies», Vladimir
Industrial Internship	LLC "LUKOIL-Tsentrnefteprodukt", Moscow
Industrial Internship	Joint Stock Company "Rusatom Overseas", Moscow
Industrial Internship	Joint Stock Company "Mosoblgaz", Odintsovo
Industrial Internship	LLC "RN-Yuganskneftegaz", Nefteyugansk
Research Internship	All-Russian Research Institute of Environmental Protection
Research Internship	Federal Autonomous organization "National Institute of Accreditation", Moscow
Research Internship	Federal State Budgetary Institution "All-Russian Center for Plant Quarantine"

Research Internship	Joint Institute for High Temperatures, Russian Academy of Sciences, Moscow

6. CHARACTERISTICS OF EDUCATIONAL PROGRAMME GRADUATE'S PROFESSIONAL ACTIVITIES

6.1. The field of professional activity of the Educational Programme graduate

The field(s) of professional activities of the Educational Programme graduate includes design, survey, research, production, marketing, consulting, economic, legal, training, expert departments, bureaus, centers, companies, institutions in the field of ecology and nature management.

Professional activity is aimed at ensuring carbon neutrality based on innovative carbon capture and storage technologies implementation and carbon test areas organization.

6.2. The type(s) of professional activities tasks, which the graduate is trained to solve when mastering the Educational Programme

The graduate of Educational Programme «Climate Project Management» (in English) must be prepared for solving professional problems in accordance with the Federal State Educational Standard of Higher Professional Education and the master's program profile focus. A graduate must be proficient in the following types of professional activities, namely, to have knowledge, skills and abilities in the field:

design and production activities:

- designing standard environmental measures, including the measures on GHG emissions elimination;
- environmental control and monitoring organization;
- environmental problems identification and diagnosis, development of practical recommendations for the natural environment conservation;
- carbon capture and storage management at the enterprise level;

organizational and managerial activities:

- activities management of the department, sector, working group;
- drawing up final documents based on the production results or scientific task implementation;
- GHG management systems development for enterprises and industries;

A graduate of the Educational Programme «Climate Project Management» must also have the following **additional professional skills and abilities***:*

in the field of **design and production activities**

- develop the projects for expansion, reconstruction, modernization of existing production facilities taking into account the requirements of standards in the field of greenhouse gas management;
- preparation of project documentation (definition of a baseline, monitoring plan), as well as documentation for validation and verification of projects;
- structuring and managing climate projects;
- carrying out calculations of absorption / emissions of greenhouse gases and forecasting their changes depending on the selected technologies;

in the field **of organizational and managerial activity**:

- improving the greenhouse gas management system in regions of the world;
- effective management of climate projects at state and commercial enterprises that are major emitters of greenhouse gases;
- assessing the effectiveness of achieving carbon neutrality of enterprises;
- organizing the activities of carbon rest areas.

6.3. The list of generalized labor functions and labor functions which are related to the professional activities of the Educational Programme graduate and are taken into account in the course of its development

Code and title of occupational standard	Generalized labor functions			Labor functions		
	Code	Title	Qualification level	Type	Code	Qualification level (sublevel)
40.117 "Specialist in environmental safety (in industry)"	C	Measures development and implementation to improve the organization's environmental activities efficiency	6	Conducting an environmental analysis of expansion projects, reconstruction, existing production facilities modernization, new technologies and equipment being created in the organization	C/01.6	6
				Development and environmental economic justification of plans for the introduction of new environmental protection equipment	C/03.6	6

				and technologies in the organization		
				Economic regulation of organization environmental activities	C/05.6	6
				The organization's personnel training organization in the field of environmental safety	C/06.7	6

7. REQUIREMENTS FOR EDUCATIONAL PROGRAMME OUTCOMES

7.1. Upon completion of the Educational Programme, the graduate is expected to acquire the following Generic Competences (GCs):

Code and descriptor of generic competence	Code and competence level indicator
GC-1. Able to carry out a problem situations critical analysis based on a systematic approach, able to develop an action strategy	**GC-1.1** can analyze the problem situation as a system, identifying its components and the links between them
	GC-1.2 owns argumentation and develops a meaningful strategy for solving a problem situation based on a systematic and interdisciplinary approach
	GC-1.3 knows the basic strategies and identifies possible risks, suggesting ways to eliminate them
GC-2. Able to manage a project at all of its life cycle stages	**GC-2.1** can formulate a project task based on the problem posed and a way to solve it
	GC-2.2 can develop the project concept, formulate its goal and objectives, argue the relevance, expected outcomes and scope of their application
	GC-2.3 can develop a project roadmap taking into account possible risks and necessary resources
GC-3. Able to organize and manage the team work, developing a team strategy to achieve the goal	**GC-3.1** owns the techniques and methods of teamwork, organizes the team members selection to achieve the goal
	GC-3.2 capable to organize and adjust the team work, based on the collegial decisions too
	GC-3.3 can delegate authority to team members and distribute assignments, give feedback on the results, take responsibility for the overall result
GC-4. Able to apply modern communication technologies, including foreign language(s) for academic and professional interaction	**GC-4.1** can establish contacts and organize communication in accordance with the needs of joint activities, using modern communication technologies
	GC-4.2 knows the basics of business documentation and uses professional vocabulary in foreign and Russian languages
	GC-4.3 capable to organize a results discussion and present the research results and project activities at various public events in Russian or foreign language, choosing the most appropriate format

GC-5. Able to analyze and take into account the cultures diversity in the intercultural interaction process	**GC-5.1.** knows the main categories of philosophy, the laws of historical development, the intercultural communication basics
	GC-5.2 is able to communicate in the world cultural diversity and demonstrate mutual understanding between students - representatives of different cultures in compliance with ethical and intercultural standards
	GC-5.3. owns the practical skills of philosophical and historical facts analyzing, evaluating cultural phenomena as well as analyzing and revising one's views in case of disagreements and conflicts in intercultural communication
GC-6. Able to identify and implement the priorities of their own activities and ways to improve it based on self-assessment	**GC-6.1** can evaluate resources and their limits (personal, situational, temporary), use them appropriately
	GC-6.2 capable to determine educational needs and ways to improve their own (including professional) activities based on self-assessment
	GC-6.3 owns skills in the flexible professional trajectory building, taking into account the accumulated experience of professional activity, dynamically changing labor market requirements and personal development strategies
GC-7. Able to find the necessary sources of information and data as well as to perceive, analyze, remember and transmit information using digital tools. Able to control information, its reliability, drawing logical conclusions based on incoming information and data, when working with information obtained from various data sources	**GC-7.1** owns the skills in digital technologies use and search methods
	GC-7.2 can process, analyze, store and correctly present information
	GC-7.3 knows the principles and techniques of modern corporate information culture and the digital economy basics

7.2. Upon completion of the Educational Programme, the graduate is expected to acquire the following general professional competences (GPCs):

Code and descriptor of general professional competence	Code and competence level indicator
GPC-1. Able to use philosophical concepts and methodology of scientific creation on the various levels of matter, space and time study	**GPC-1.1** knows the philosophical concepts of natural science and methodology of scientific creation
	GPC-1.2 able to use in-depth knowledge in the philosophical concepts of natural science in assessing the professional activities consequences
	GPC-1.3 able to apply the acquired knowledge in the research activities, to make correct generalizations and conclusions
GPC-2. Able to use special and new sections of ecology, geoecology and nature management in solving research	**GPC-2.1** knows the basics of ecology, geoecology, environmental economics and circular economy, as well as environmental management

and applied problems of professional activity	**GPC-2.2** able to use environmental, economic and other special knowledge and algorithms to solve professional problems
	GPC-2.3 able to find, analyze and competently use latest information and modern techniques in the research and applied tasks performance
GPC-3. Able to apply environmental research methods to solve research and applied problems of professional activity	**GPC-3.1** knows the principles and methods of environmental monitoring related with different environmental components
	GPC-3.2 owns analytical methods of pollutants control, physical impacts and processing of the received information
	GPC-3.3 able to develop environmental monitoring and control systems in production and solve applied problems in professional activities
GPC-4. Able to apply regulatory legal acts and norms of professional ethics in the field of ecology and nature management	**GPC-4.1** knows the environmental regulation and legislation basics in the field of nature management
	GPC-4.2 knows how to use and apply regulatory legal acts in the field of ecology and nature management
	GPC-4.3 able to use the professional ethics norms in the professional activities
GPC-5. Able to solve the professional activity problems in ecology, environmental management and protection using information and communication, including geoinformation technologies	**GPC-5.1** knows how to choose and apply algorithm for solving environmental problems and implements algorithms using software
	GPC-5.2 owns the skills to use information technology tools for searching, storing, processing, analyzing and presenting information
	GPC-5.3 can process earth remote sensing data and use cartographic materials, owns modern GIS technologies
GPC-6. Able to design, represent, protect and disseminate the results of the professional activities, including research	**GPC-6.1** able to receive, analyze, summarize the necessary scientific information using modern research methods, present their own results in the form of scientific articles and public speeches
	GPC-6.2 owns the skills of oral report and presentation with regards to the project and scientific activities results
	GPC-6.3 knows methodological foundations of scientific research, copyright and scientific ethics requirements

7.3. Upon completion of the Educational Programme, the graduate is expected to acquire the following professional competences (PCs)*

Code and descriptor of professional competence	**Code and competence level indicator**	**Code and title of occupational standard for relevant PC**
In **organizational and managerial activities** :		

PC-1 Able to organize and manage the enterprise activities using in-depth knowledge in the field of greenhouse gas management	**PC-1.1** knows the production and organizational structure of the organization, the regulatory framework for greenhouse gas management	
	PC-1.2 able to organize the management of research, scientific, production and expert-analytical work at the enterprise	
PC-2 Able to develop and economically argue plans for the new environmental equipment and technology's introduction to achieve enterprise carbon neutrality	**PC-2.1** knows the environmental forecasting basics when introducing new environmental equipment and technologies into an enterprise	**40.117 "Specialist in environmental safety (in industry)"**
	PC-2.2 able to economically argue plans for introducing new equipment and technologies to reduce greenhouse gas emissions	**40.117 "Specialist in environmental safety (in industry)"**
	PC-2.3 owns the skills to select and implement the best available technologies (BAT) to reduce the risks associated with climate change	**40.117 "Specialist in environmental safety (in industry)"**
PC-3 Able to develop measures for the economic regulation of the enterprise's environmental performance, as part of the transition to a low-carbon economy	**PC-3.1** knows approaches to formulate and economically argue the management decisions on mitigation and adaptation to climate change	**40.117 "Specialist in environmental safety (in industry)"**
	PC-3.2 able to determine the economic efficiency of climate projects	**40.117 "Specialist in environmental safety (in industry)"**
	PC-3.3 owns the skills to prepare documentation for trading the carbon units	
In **design and production activities** :		
PC-4 Able to conduct environmental analysis of projects for expansion, reconstruction, modernization of existing production facilities, taking into account the requirements of the greenhouse gas management standards	**PC-4.1** able to carry out calculations of greenhouse gas absorption/emissions and predict their changes depending on the selected technologies	**40.117 "Specialist in environmental safety (in industry)"**
	PC-4.2 able to develop the climate projects	**40.117 "Specialist in environmental safety (in industry)"**
	PC-4.3 has skills in preparing project documentation (defining a baseline, monitoring plan), as well as documentation for projects validation and verification	**40.117 "Specialist in environmental safety (in industry)"**
PC-5 Able to develop measures to minimize possible risks of	**PC-5.1** is able to identify direct/indirect sources of	

climate change for conducting various types of economic activities	greenhouse gas emissions at all stages of the product life cycle	
	PC-5.2 has the skills to organize the activities of carbon areas	
	PC-5.3 ensures the implementation of environmental action plans, including the technologies' introduction taking into account the requirements for reducing greenhouse gas emissions	
PC-6 Able to develop projects based on existing methods for solving geoinformation problems, use modern cloud services and analytical tools to update climate data	**PC-6.1** is able to perform GIS analysis to analyze and predict regional climate changes	
	PC-6.2 has the skills to assess ecosystem services for climate regulation using remote sensing	

8. MATRIX OF COMPETENCES that students acquire when mastering the Educational Programme «**Climate Project Management»**, implemented under the RUDN University Academic Council decision dated "__" _____ 20__ (Protocol No. _____) in the field of studies Ecology and Nature Management

Code	**Courses/modules that** form students' competences	**GENERIC COMPETENCES**						
		GC-1. Able to carry out a problem situations critical analysis based on a systematic approach, able to develop an action strategy	**GC-2**. Able to manage a project at all of its life cycle stages	**GC-3**. Able to organize and manage the team work, developing a team strategy to achieve the goal	**GC-4**. Able to apply modern communication technologies, including foreign language(s) for academic and professional interaction	**GC-5.** Able to analyze and take into account the cultures diversity in the intercultural interaction process	**GC-6.** Able to identify and implement the priorities of their own activities and ways to improve it based on self- assessment	**GC-7**. Able to find the necessary sources of information and data as well as to perceive, analyze, remember and transmit information using digital tools. Able to control information, its reliability, drawing logical conclusions based on incoming information and data, when
Block 1	**Mandatory part**							
B1.O.01.01	Foreign (Russian) Language				GC 4.1. – GC 4.3			
B1.O.01.02	IT in Ecology and Natural Resources Management	GC-1.1-1.3						GC 7.1. – GC 7.3
B1.O.01.03	Philosophical problems of natural sciences tion					GC-5.1-5.3	GC 6.1. – GC 6.3	
B1.O.01.04	Methodology of Scientific Crea						GC 6.1. – GC 6.3	
	Core component							
B1.O.02.01	Carbon Credits Markets		GC 2.1. – GC 2.3					
B1.O.02.05	Climate Project Development	GC-1.1-1.3						
B1.O.02.06	Carbon Test Areas and GHG Monitoring	GC-1.1-1.3						

B1.O.02.09	International Cooperation in the Field of Nature Protection			GC-3.1-3.3				
Block 3	**Final State Examination**	GC-1.1-1.3	GC-2.1-2.3	GC-3.1-3.3	GC-4.1-4.3	GC-5.1-5.3	GC-6.1-6.3	GC-7.1-7.3
B3.01	State Exam	GC-1.1-1.3	GC-2.1-2.3	GC-3.1-3.3	GC-4.1-4.3	GC-5.1-5.3	GC-6.1-6.3	GC-7.1-7.3
B3.02	Degree Diploma	GC-1.1-1.3	GC-2.1-2.3	GC-3.1-3.3	GC-4.1-4.3	GC-5.1-5.3	GC-6.1-6.3	GC-7.1-7.3
	Optional disciplines				GC-4.1-4.3	GC-5.1-5.3		
FTD.01	Foreign Language (optional)				GC-4.1-4.3			
FTD.02	Russian Language for Foreign Students				GC-4.1-4.3			
FTD.03	History of Religions in Russia					GC-5.1-5.3		

GENERAL PROFESSIONAL COMPETENCES							
Code	**Courses/modules that** form students' competences	**GPC-1.** Able to use philosophical concepts and methodology of scientific creation on the various levels of matter, space and time study	**GPC-2.** Able to use special and new sections of ecology, geoecology and nature management in solving research and applied problems of professional activity	**GPC-3**. Able to apply environmental research methods to solve research and applied problems of professional activity	**GPC-4.** Able to apply regulatory legal acts and norms of professional ethics in the field of ecology and nature management	**GPC-5.** Able to solve the professional activity problems in ecology, environmental management and protection using information and communication, including geoinformation technologies	**GPC-6.** Able to design, represent, protect and disseminate the results of the professional activities, including research
Block 1	**Mandatory part**						
B1.O.01.02	IT in Ecology and Natural Resources Management					GPC 5.1. – GPC 5.3	
B1.O.01.03	Philosophical problems of natural sciences	GPC 1.1. – GPC 1.3					
B1.O.01.04	International Cooperation in the field of Nature Protection	GPC 1.1. – GPC 1.3					GPC 6.1. – GPC 6.3
	Core component						
B1.O.02.02	Carbon Cycles		GPC 2.1. – GPC 2.3				
B1.O.02.03	International Standards for GHG Management				GPC 4.1. – GPC 4.3		
B1.O.02.04	Environmental Engineering and Climate Change			GPC 3.1. – GPC 3.3			
B1.O.02.06	Carbon Test Areas and GHG Monitoring			GPC 3.1. – GPC 3.3			
B1.O.02.07	Climate Neutrality and Waste Management						GPC 6.1.
B1.O.02.08	Climate Change Models		GPC 2.1. – GPC 2.3				

B1.O.02.09	International Cooperation in the field of Nature Protection				GPC 4.1. – GPC 4.3		
Block 2	**Internship**						
B2.B.01(H)	Research Work (R&D) (obtaining primary skills of research work)						GPC 6.2, GPC 6.3
Block 3	**Final State Examination**	GPC 1.1. – GPC 1.3	GPC 2.1. – GPC 2.3	GPC 3.1. – GPC 3.3	GPC 4.1. – GPC 4.3	GPC 5.1. – GPC 5.3	GPC 6.1. – GPC 6.3
B3.01	State Exam	GPC 1.1. – GPC 1.3	GPC 2.1. – GPC 2.3	GPC 3.1. – GPC 3.3	GPC 4.1. – GPC 4.3	GPC 5.1. – GPC 5.3	GPC 6.1. – GPC 6.3
B3.02	Master's Thesis Defence	GPC 1.1. – GPC 1.3	GPC 2.1. – GPC 2.3	GPC 3.1. – GPC 3.3	GPC 4.1. – GPC 4.3	GPC 5.1. – GPC 5.3	GPC 6.1. – GPC 6.3

Code	Courses/modules that form students' competences	PROFESSIONAL COMPETENCES					
		PC-1 Able to organize and manage the enterprise activities using in-depth knowledge in the field of greenhouse gas management	**PC-2** Able to develop and economically argue plans for the new environmental equipment and technology's introduction to achieve enterprise carbon neutrality	**PC-3** Able to develop measures for the economic regulation of the enterprise's environmental performance, as part of the transition to a low-carbon economy	**PC-4** Able to conduct environmental analysis of projects for expansion, reconstruction, modernization	**PC-5** Able to develop measures to minimize possible risks of climate change for conducting various types of economic activities	**PC-6** Able to develop projects based on existing methods for solving geoinformation problems, use modern cloud services and analytical tools to update climate data
Block 1							
Core component							
B1.O.02.01	Carbon Credits Markets		PC 2.1	PC 3.1-3.3			
B1.O.02.02	Carbon Cycles				PC 4.1., PC 4.2		
B1.O.02.03	International Standards for GHG Management	PC 1.1			PC 4.3		
B1.O.02.04	Environmental Engineering and Climate Change	PC 1.1 – PC 1.2	PC 2.3			PC 5.1	
B1.O.02.05	Climate Project Development				PC 4.1-4.3		
B1.O.02.06	Carbon Test Areas and GHG Monitoring				PC 4.1, 4.3	PC 5.2	
B1.O.02.07	Climate Neutrality and Waste Management		PC 2.2, PC 2.3		PC 4.1	PC 5.3	
B1.O.02.08	Climate Change Models				PC 4.1, PC 4.2		
Variable component							
B1.B.ДВ.01.01	Remote Sensing Technics for Climate Change Assesment						PC 6.1 – PC 6.2
B1.B.ДВ.01.02	Geoinformatics for Enterprise Carbon Neutrality						PC 6.1 – PC 6.2
B1.B.ДВ.02.01	Low-carbon Economy			PC 3.1			PC 6.2
B1.B.ДВ.02.02	Ecosystem Services for Climate Change Mitigation			PC 3.1			PC 6.2

Block 2	**Internship**						
B2.O.01.01(П)	Industrial Internship	PC 1.1			PC 4.1-4.3	PC 5.1	
B2.B.01(Н)	Research Work (R&D) (obtaining primary skills of research work)				PC 4.2	PC 5.1	
B2.B.02(Пд)	Pre-graduate Internship	PC 1.2			PC 4.1-4.3	PC 5.1 – PC 5.3	
Block 3	**Final State Examination**						
B3.01	State Exam	PC 1.1 – PC 1.2	PC 2.1 – PC 2.3	PC 3.1 – PC 3.3	PC 4.1-4.3	PC 5.1 – PC 5.3	PC 6.1 – PC 6.2
B3.02	Master's Thesis Defence	PC 1.1 – PC 1.2	PC 2.1 – PC 2.2	PC 3.1 – PC 3.3	PC 4.1-4.3	PC 5.1 – PC 5.3	PC 6.1 – PC 6.2