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**Federal State Autonomous Educational Institution of Higher Education**  
**PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA**  
**NAMED AFTER PATRICE LUMUMBA**  
**RUDN University**  
**academy of engineering**  
(educational division (faculty/institute/academy) as higher education programme developer)

Approved at the meeting of Academic  
Council of RUDN University  
Protocol № 2022-08/24-11/1  
29.11.2024  
(date, month, year)

**PROFESSIONAL EDUCATION PROGRAMME OF HIGHER EDUCATION**

Field of Studies / Specialty:

**2.8.4. Development and operation of oil and gas fields**  
(scientific speciality code and title)

Profile / Specialisation

**Development and operation of oil and gas fields**  
(PhD program title)

The Educational Programme is developed in compliance with:

**Educational Standard of RUDN University**, approved by order of the Rector of RUDN University No. 139 dated March 9, 2022.

Length of Educational PhD Programme:

**4 years**  
(full-time education)

Educational PhD Programme Features: programme is implemented in English

AGREED by:

Head of Educational  
Programme  
Khavkin A. Ya.

  
(signature)

Head of Educational Policy  
Department  
Yorobyeva A. A.

  
(signature)

Head of Faculty  
Rasoumny Yu.N.

  
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Head of PhD Study  
Department  
Borisova A. S.

  
(signature)

2025 г.

## **1. EDUCATIONAL PROGRAMME GOAL**

*The goal of the PhD program is to prepare and defend a dissertation for the degree of Candidate of Sciences in the scientific specialty 2.8.4. Development and operation of oil and gas fields.*

## **2. BRIEF SUMMARY OF THE PROGRAMME**

The program is focused on the training of highly qualified specialists in the direction of training 2.8.4. Development and operation of oil and gas fields. The curriculum is designed in such a way that it allows students to form professional competencies that are currently in demand. The purpose of the program is to create conditions for acquiring the necessary level of knowledge, skills, experience and experience for the implementation of professional activities and preparing for the defense of a scientific qualification work (dissertation) for the degree of candidate of sciences, as well as conducting scientific research in the interests of the development of science, mankind and humanitarian values. Research activities within the framework of the educational program cover the field of science and technology, which studies:

- geological and production facilities of subsoil development,
- geotechnologies of subsoil development,
- equipment and technical systems,
- methods, techniques and technologies technologies for ensuring safe and environmentally friendly mining of mineral deposits,
- methods and systems of designing geotechnologies of exploration and exploitation of interior part of the Earth,
- software to study the geological structure of the subsoil, modeling processes of prospecting, exploration, production and processing (enrichment), transportation and storage of minerals,
- design equipment and technical systems, processing and analysis of research results.

In the process of studying, postgraduate students receive theoretical and practical training and skills in research and scientific and pedagogical work, which allow them to work effectively after completing the study of the educational program in enterprises of various fields and industries in senior positions, as well as in research and educational organizations....

## **3. LABOR MARKET NEEDS FOR PERSONAL TRAINING IN EDUCATIONAL PROGRAMME PROFILE**

Graduates who have mastered this program are focused on work in Russian and international companies, enterprises, educational institutions, research organizations in various fields of industry related to subsoil use and mining sciences. State and commercial structures of science-intensive industries are interested in graduates, in particular, enterprises of oil and gas development and other leading industries, as well as for the development of an element base used in the digitalization of various sectors of the economy.

Graduates who have mastered this program are oriented to work in the Russian and international companies specializing in the exploration and development of mineral deposits: design and development, production, operating organizations, research centers, higher educational institutions.

Analysis of the status and trends of development of research and educational activities in the field of mining and oil and gas field geology shows that the training of researchers in this industry is one of the necessary conditions for increasing the capacity and competitiveness of domestic educational institutions of higher education, research organizations and enterprises of mining and geological industry, carrying out within their activities scientific and educational.

In the professional sphere, the main consumers of the educational program are such organizations and enterprises in Russia as:

- Ministry of Energy of the Russian Federation
- Ministry of Natural Resources and Environment of the Russian Federation

- Federal Agency for Subsoil Use (Rosnedra);
- All-Russian Research Institute of Geology of Foreign Countries
- All-Russian Research Geological Oil Institute (VNIGNI, Moscow)
- All-Russian Research Institute of Organization, Management and Economics of Oil and Gas Industry (Moscow)
- Transneft, Gazprom, Zarubezhneft, Novatek; Yamal LNG; Caspian Pipeline Consortium, Tatneft, LUKoil, TNK, Slavneft, Rosneft, VSNK, Surgutneftegas, NGDU LeninogorskNeft, JSC All-Russian Oil and Gas Research Institute, Chevron Oil Corporation (USA), Elf Aquitaine Oil Company (France), Erdoyale Erdgas Oil and Gas Company (Germany), Vietsovpetro (Vietnam), Petron Industries Inc. etc.

#### **4. REQUIREMENTS FOR APPLICANTS APPLYING TO THE PHD PROGRAMME**

For admission to the program, the Admission Rules apply, approved by the relevant local regulatory act and posted in the public domain on the official website of the RUDN University.

#### **5. STRUCTURE AND WORKLOAD OF THE EDUCATIONAL PROGRAMME FOR PhD STUDIES**

Duration of mastering the postgraduate program: 4 years.

Form of education: full-time.

One credit unit corresponds to 36 academic hours.

<b>No.</b>	<b>PhD programme structure</b>	<b>Workload, credit units</b>
1	Scientific Component	210
1.1	Research activity aimed at preparing for a thesis defense	178
1.2	Preparation of publications and (or) patent applications provided for in paragraph 5 of the Educational Standard of RUDN University	24
1.3	Intermediate certification at the stages of scientific research	8
2	Educational Component	24
2.1	Disciplines (modules)	13
2.2	Internship	5
2.3	Intermediate certification in disciplines (modules) and internship	6
3	Final attestation	6
PhD programme workload in credit units:		240

#### **6. CHARACTERISTICS OF EDUCATIONAL PROGRAMME GRADUATE'S PROFESSIONAL ACTIVITIES**

The field(s) of professional activities of the Educational Programme graduate, where he/she can carry out his/her professional activities: in science and technology related to geology, exploration and development of mineral deposits:

- production and geological (mining and geological) structure of deposits and fields of hydrocarbons and underground gas storages, reservoirs and properties of fluids saturating them.
- geological and physical and physical-chemical processes occurring in reservoirs and the surrounding geological environment during the extraction of oil and gas from the subsurface by known and newly created technologies and technical.
- means of ensuring a system of integrated design and monitoring of hydrocarbon deposits development processes, operation of underground gas storage facilities.
- technologies and technical means of production and preparation of well products, diagnostics of equipment and field facilities.
- computer technologies of design, research, operation, control and management of natural and technogenic systems.
- teaching activity in the field of development and operation of oil and gas fields.

## 7. LOCATION OF IMPLEMENTATION OF THE PHD PROGRAMME

The PhD program is implemented by the Federal State Autonomous Educational Institution of Higher Education Peoples' Friendship University of Russia named after Patrice Lumumba.

The information about partner organisations involved in the implementation of the PhD programme:

Internship and Scientific Research	Internship location
Pedagogical Training (stationary)	RUDN University, Moscow
Research activity aimed at preparing for a thesis defense (stationary)	RUDN University, Moscow; Third party organizations performing research and development, depending on the focus of the research

## 8. FEATURES OF EDUCATIONAL PROGRAMME IMPLEMENTATION

The PhD program is implemented with elements of DET (based on the TUIS platform).

The language of implementation of the PhD program is English.

The program is *not adapted* for teaching the disabled and people with disabilities.