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### ПРОГРАММА ПОДГОТОВКИ НАУЧНЫХ И НАУЧНО-ПЕДАГОГИЧЕСКИХ КАДРОВ В АСПИРАНТУРЕ

Научная специальность:

1.6.10. Геология, поиски и разведка твердых полезных ископаемых, минерагения (код и наименование научной специальности)

Направленность (профиль):

## Geology, Prospecting and Exploration of Solid Minerals, Minerageny / Геология, поиски и разведка твердых полезных ископаемых, минерагения (англ.)

(наименование программы подготовки научных и научно-педагогических кадров)

Программа подготовки научных и научно-педагогических кадров в аспирантуре разработана в соответствии с требованиями:

СУТ РУДН, утвержденных приказом ректора от 09 марта 2022 г. № 139

Срок освоения программы подготовки научных и научно-педагогических кадров в аспирантуре:

3 года

(очная форма обучения)

Сведения об особенностях реализации программы: реализуется на английском языке.

### СОГЛАСОВАНО:

Руководитель программы Георгиевский А. Ф. (подпись) Начальник УОП Воробьева А

(подпись)

Директор академии Разумный Ю. Н. (подпись) Начальник ДАД Борисова А. С

### **1. EDUCATIONAL PROGRAMME GOAL (MISSION)**

The purpose of postgraduate studies is to guide the postgraduate student to the development of an academic career, maximum adaptation in the scientific environment. The goal is to solve the problems of building a nationally oriented economy and the formation of the necessary quality of "human capital".

The goal is to prepare and defend a dissertation for the degree of candidate of sciences.

## 2. EDUCATIONAL PROGRAMME RELEVANCE, SPECIFICITY, AND UNIQUENESS

The program is focused on the training of highly qualified specialists in the direction of training 1.6.10. Geology, prospecting, and exploration of solid minerals, minerageny. 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:

- Earth and its main geospheres lithosphere, hydrosphere, atmosphere, biosphere, their composition, structure, evolution and properties;
- geological and production facilities of subsoil development; prospecting and exploration of mineral resources;
- methods and technologies to ensure safe and environmentally friendly exploration and exploitation of mineral deposits;
- methods and systems of design of prospecting, exploration and typing of ores of solid minerals;
- software tools to study the geological structure of deposits, modeling of their formation processes, as well as prospecting and exploration; 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. LABOUR MARKET NEEDS FOR PERSONNEL 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 geology, prospecting, and exploration of solid minerals. State and commercial structures of science-intensive industries are interested in graduates, in particular, enterprises related to the Earth sciences and other leading industries.

Graduates who have mastered this program are oriented to work in the Russian and international companies specializing in geology, prospecting, and exploration of solid minerals, minerageny: 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 general and regional 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:

- a) in federal authorities Ministry of Natural Resources and Environment of the Russian Federation, Federal Agency for Subsoil Use (Rosnedra) in the position of expert specialist, leading consultant, head of department, director of department, deputy minister, minister
- b) in the leading research institutes of the Russian Academy of Sciences of the country
  All-Russian Research Institute. A.P. Karpinsky (VSEGEI, St. Petersburg), Geological Institute (GIN RAS, Moscow), Institute of Geology and Mineralogy (IGEM RAS, Moscow), Institute of Geochemistry and Analytical Chemistry (GEOKHI RAS, Moscow), Institute of oceanology P.P. Shirshov (IO RAS, Moscow), Arctic and Antarctic Research Institute (AARI, St. Petersburg), Institute of Geology and Mineralogy named after. V.S. Sobolev (IGM SB RAS, Novosibirsk), Institute of Petroleum Geology and Geophysics. A.A. Trofimuk (INGG SB RAS), Institute of Geology. N.P. Yushkin (Syktyvkar), Institute of the Earth's Crust (Irkutsk), Far Eastern Geological Institute (Vladivostok), Institute of Tectonics and Geophysics. Yu.A. Kosygin (Khabarovsk), Institute of Volcanology and Seismology (Petropavlovsk-Kamchatsky) in positions from researcher to chief researcher, head of the laboratory, deputy director, director of the institute.
- c) in leading geological state and commercial organizations: Central Research Geological Exploration Institute (TsNIGRI, Moscow), All-Russian Scientific Research Institute of Mineral Resources named after Fedorov (Moscow). Russian Geological Holding (Rosgeologiya, Moscow), Yuzhgeologiya (Rostov on Don), All-Russian Research Institute of Geology of Foreign Countries (VNIIZARUBEZHGEOLOGIA, Moscow), Yuzhmorgeologiya (Gelendzhik), MMC Norilsk Nickel, UC RUSAL, RGK ALROSA, JSC Apatit, GK RossZoloto, PJSC Mechel, Severstal, etc. in positions from a manager to the head of the company.
- In addition, a graduate will be able to successfully engage in teaching activities in leading universities in Russia (Moscow State University, St. Petersburg State University, Moscow State Geological Institute, Tomsk State University, National State University, KFU, South Federal University, UrFU, PFU, PFUR, Russian State University of Oil and Gas, FEFU, etc.) and abroad as an associate professor, professor, head of department, dean, vice-rector, and rector.

### 4. SPECIAL REQUIREMENTS FOR POTENTIAL APPLICANTS

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. FEATURES OF EDUCATIONAL PROGRAMME IMPLEMENTATION

5.1. The program is implemented without the use of a network form, without the use of distance learning technologies, with the use of e-learning elements using the TUIS RUDN University system.

5.2. The language of the PhD program is English.

5.3. The program does not provide for the training of people with disabilities and people with disabilities.

5.4. The Educational Programme is implemented by the Federal State Autonomous Educational Institution of Higher Education "Peoples' Friendship University of Russia.

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

Internship*	Internship location (RUDN University, Moscow)
Pedagogical practice (stationary)	RUDN University, Moscow

## 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, prospecting, and exploration of solid minerals:

- study, modeling, design of methods of prospecting, exploration and development of resource potential of the subsoil;

- study, forecasting and modeling of structures of ore fields, areas and deposits;

- research and development of innovative solutions to improve the technical level of exploration and calculation of solid minerals reserves, selection of types and varieties of ores;

- engineering and geological support of human activities in the Earth's interior in the exploration, search for solid minerals.

- research, scientific justification of principles and ways to ensure industrial safety and environmental friendliness in prospecting, exploration and mineral processing;

- teaching activity in the field of geology, prospecting, and exploration of solid minerals.