**«Approved»**

at the meeting of the Department of Water,

Oil and Gas Resources and Georisks

Protocol No. 7.

from "4" May 2023

**STRATEGY**

**for the development of the Department of Water, Oil and Gas Resources and Georisks of the Kyrgyz Mining and Metallurgical Institute named after U. Asanaliev of the Kyrgyz State Technical University named after I. Razzakov for the period from 2023 to 20281.**

**1. General Provisions**

The Development Strategy of the Department of Water, Oil and Gas Resources and Georisks of the U. Asanaliev Kyrgyz Mining and Metallurgical Institute of the I. Razzakov Kyrgyz State Technical University (KG-MI) for 2023-2028 was developed in order to implement and ensure the objectives defined in the Development Strategy of the I. Razzakov Kyrgyz State Technical University (KSTU) for 2023-2028.

Water, Oil and Gas Resources and Georisks is committed to ensuring sustainability and positive social impact through partnerships, research, education and innovation, community engagement and knowledge transfer, ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all, as defined in the UN “Sustainable Development Goals - 2030”.

Mission: Providing, improving and developing quality education, based on the achievements of science, engineering, technology and integration into the world educational space, aimed at the innovative development of the Kyrgyz Republic, in accordance with the needs of the labor market, society, economy and the state through the implementation of competitive educational programs for training specialists, masters and PhD doctors in the direction of 630001, 630100 “Applied Geology” and bachelors and masters in the direction of 630400 “Oil and Gas Engineering”.

The profiles of training/specialization, in-depth teaching of topics of various disciplines are supposed to be maximally linked to the needs of production and orders of employers, as well as taking into account the priorities of the country's economic development and the strategy of industry development, taking into account the fact that the training of specialists with higher education in the above-mentioned areas is carried out in the Kyrgyz Republic only at our department.

Department of Water, Oil and Gas Resources and Georisks of U. Asanaliev KSTU I. Razzakova, was organized in 1969 and is a graduation for students (specialties (specialty) "Prospecting and exploration of groundwater and engineering-geological surveys", "Geology of oil and gas"), masters (main educational program "Georisky") and PhD doctors (scientific and educational program "Geoinformation systems and technologies in applied geology") in the direction of Applied Geology and "Development and operation of oil and gas fields" of the direction of Oil and Gas Engineering (bachelor's degree, master's degree).

The main goal of this strategy is: the formation of a team of professionals at the department, capable of training qualified specialists who meet modern requirements. This goal can be achieved by solving problems within the framework of the implementation of the KSTU Development Strategy, according to which the priority areas of the department's activities are:

- ensuring a high level of quality education in accordance with international standards and changing requirements for the skills and knowledge of graduates;

- internationalization of education and science, providing for the interrelation of activities for the commercialization of the results of education, science, innovation and scientific research.

**2. Academic work**

To achieve this goal, it is envisaged to expand specialization within the existing specialties, and in the future to open new specialties.

Taking into account global trends in the development of the educational process as a whole and the needs of the industry, both the country and the region, it seems promising to adopt the following scheme for training specialists in the near future:

Direction "Oil and Gas Engineering": Bachelor's degree → Master's degree

2. Direction "Applied Geology":

a) Specialist's degree →Postgraduate study →Candidate of Sciences →Doctor of Sciences

b) Bachelor's degree →Master's degree →PhD

c) Specialist's degree →PhD

In addition, work will be intensified on working with international organizations, projects in the field of education, as well as academic exchange, internships, etc.

**3. Educational and methodological work**

The main attention will be paid to the introduction of new innovative technologies of training, including information technologies using modern technologies and technical means.

The priority tasks are:

1. Equipping educational laboratories with modern devices, primarily computers and software;

2. Creating electronic teaching aids;

3. Creating an electronic library of educational and scientific literature;

4. Connecting to leading Internet resources in the area of ​​the department's activities.

5. Implementing computer testing programs;

6. Updating educational and methodological materials taking into account new scientific achievements and modern practical requirements;

7. Creating textbooks, teaching aids in Kyrgyz

**4. Research work**

The main objective is to improve the qualifications of the department staff. The department staff plans to carry out the following activities to solve this problem:

1. Carrying out systematic research work on current issues in the industry;

2. Involving personnel in the work of leading scientific and technical councils, commissions in the industry;

3. Regularly prepare publications and participate with a report in scientific and technical conferences;

4. Prepare proposals for participation in international, national projects, programs in science and technology, internships, academic exchange, participation in conferences;

5. Hold regular scientific and technical seminars at the department, where reports on research, graduate students and speeches of famous scientists on current topics are discussed;

6. Put the training of highly professional personnel (doctors, candidates, PhD, masters) on a regular basis;

7. Create conditions for the defense of dissertations by department teachers.

**5. Strengthening the material and technical base**

Equipping educational laboratories, work places of the department staff with modern technical means is of great importance in the training of specialists. Modern educational laboratories allow teaching students not only the skills of working with modern technologies and technical means, but also promote high-quality assimilation of educational material.

The devices and equipment of the educational laboratories of the department have not been updated over the past 10-15 years, most of the devices have become unusable or morally obsolete. In order to

bring the laboratory base into line with the modern requirements of geological science and practice, it is necessary:

1. Equipping laboratories with IT technologies and modern specialized software;

2. Re-equipping laboratories with modern portable devices for express analysis;

3. Regular updating of laboratory educational materials (maps, sections, photographs), small equipment and consumables (dishes, reagents, etc.).

To implement these activities, it is necessary to attract financial resources, both from the institute and from donors (manufacturing organizations, businessmen, international projects, etc.).

**6. Relations and cooperation**

Strengthening relations and establishing cooperation with scientific, industrial organizations and educational institutions in the area of ​​activity allows solving the following tasks:

1. Improving the qualifications of the department staff through internships, participation in joint research programs, postgraduate studies, participation in conferences;

2. Conducting educational and industrial practices for students;

3. Employment of graduates of the department;

4. Adjustment of curricula based on the needs of the industry

5. Implementation of best practices, improvement and mutual exchange of teaching aids, literature, etc.

6. Opening of branches of the department on the basis of industrial, research enterprises and institutions.

In order to implement priority areas, a set of activities is envisaged within the framework of the following system of interrelated programs provided for in the KSTU Development Strategy:

1. Quality education (Appendix 1);

2. Advanced science and innovation (Appendix 2);

3. Strengthening human resources (Appendix 3);

4. Expanding international cooperation (Appendix 4).