



NJSC SHAKARIM UNIVERSITY OF SEMEY

# **DEVELOPMENT PLAN EDUCATIONAL PROGRAM**

6B11201 - Safety and Environmental Protection

Semey

NON-PROFIT JOINT STOCK COMPANY «SHAKARIM UNIVERSITY OF SEMEY»

APPROVED

Board Member – Vice-Rector for Academic Affairs

I. Oralkanova



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«27» 05 2023

EDUCATIONAL PROGRAM DEVELOPMENT PLAN

6B11201 «Life safety and environmental protection»  
(EP code and name)

for 2023 - 2027

Semey 2023

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### 1. Passport of the Development Plan of the Bachelor's degree 6B11201 «Life safety and environmental protection»

1	The basis for the development	Strategic Plan of Shakarim University for 2023-2027 Work plan of the Faculty of Engineering and Technology Strategic development plan of the Department «Chemical Technology and Ecology»
2	Terms of implementation	2023-2027 years
3	Expected results of implementation	Improving the educational program 6B11201 «Life safety and environmental protection» in accordance with the mission and strategies of the university, preparing a bachelor's degree that meets the requirements of employers and the modern labor market

## 2. Analytical justification of the EP

### 2.1 Information about the educational program

The educational program has been developed in accordance with the National Qualifications Framework and Professional Standards, according to the Dublin Descriptors and the European Qualifications Framework. The typical period of mastering the bachelor's degree program is 4 years.

The educational program 6B11201 «Life safety and environmental protection» was developed by the Academic Committee of the educational program 6B11201 - Life safety and environmental protection in the field of training 6B112 - Occupational health and safety at work on the basis of the State Standard of the Republic of Kazakhstan dated 31.10.2018 No. 604.

Considered at the meeting of the Quality Assurance Commission of the Faculty of Engineering and Technology (Protocol No. 4\6 of «10» 04.2023)

Approved at the meeting of the Academic Council of the University (Protocol No. 8 «25» 04. 2023).

The main criterion for the completion of the educational process is the development of at least 240 credits, with the award of a Bachelor's degree in the field of services under the educational program 6B11201 «Life safety and environmental protection»

### 2.2 Information about students

Academic year The basis of training	2023-2024 academic year	2024-2025 academic year	2025-2026 academic year	2026-2027 academic year
Grant	15	15	15	15
Contract	3	3	3	3
Total	18	18	18	18

### 2.3 Internal and external conditions for the development of EP

For the preparation of bachelors, the department has classrooms, technical training facilities, visual and demonstration materials.

When implementing OP 6B11201 «Life safety and environmental protection», the classroom fund of the department and the university is used. Video projectors and interactive whiteboards are used for lectures and practical classes. The department is

equipped with various equipment for conducting interactive lectures, which are available to all students, including remote technology using the portal <https://ais.semgu.kz/> / <https://ais.semgu.kz/>.

The number of classrooms completely covers the entire contingent of the department and ensures continuity in accordance with the schedule of the educational process.

The sanitary condition of classrooms, laboratories and offices complies with the required regulatory documents. A passport has been drawn up for each audience with an indication of seats, the amount of inventory, as well as the occupied area.

The provision of educational programs with educational and methodological complexes of disciplines is 100%. The acquisition of new educational and scientific literature in accordance with the educational program 6B11201 «Life safety and environmental protection» is carried out annually. The Kazakhstan Automated Library and Information System has been introduced in the scientific library, which is used to automate library and bibliographic processes for the acquisition and accounting of library funds and information and library services.

The department widely attracts highly qualified specialists from leading enterprises and organizations of the region to improve the practical skills of students during their internship. In order to organize this kind of work, the Shakarim University of Semey concluded Memoranda of Cooperation for 5 years with:

- RSU «Emergency Management of the city of Semey» Department of Emergency Situations of the East Kazakhstan Region of the Ministry of Emergency Situations of the Republic of Kazakhstan (2021)
- Ministry of Emergency Situations of the Republic of Kazakhstan «Abai Territorial Operational Management» branch of the State Institution «Kazselezashchita» (2022).

The department on an ongoing basis ensures communication with graduates and generates data on career growth. Graduates of the educational program are employed in various fields. According to the Association of Graduates of the Faculty of Engineering and Technology, employment is represented by profession in large organizations and educational institutions: The Ministry of Emergency Situations of the Republic of Kazakhstan «Abai Territorial Operational Management» branch of the State Institution «Kazselezashchita»; RSU «Emergency Management of the city of Semey» Emergency Department of the East Kazakhstan EMERCOM of the Republic of Kazakhstan; RSU «Rescue and rescue work» Emergency department of the Abai region; Auezovsky police department of Semey; State Administration «Control Department of the Abai region»; Alina Group LLP; Vostokenergo LLP (Occupational Safety and Health engineer); Semey Ormany MOTR RMM, branch of Tau-Dala; «Shulbinskaya HPP NPP» LLP. The published information about the employment of young specialists is confirmed by certificates from the place of work.

For the organization of dual training, the department concluded contracts with the educational institutions of the RSU «Emergency Management of the city of Semey» of the Emergency Department of the Ministry of Emergency Situations of the Republic of Kazakhstan and LLP «Fire Safety» of the city of Semey.

Within the framework of foreign cooperation, mass training seminars were held in 2021 among students and teaching staff of the department under the program «Basic life support» conducted by Professor of the Polish University Tomasz Zalewski. Following the results of the work, certificates of PSS and a group of students who participated in practical trainings were awarded

In 2022, the head of the Department Sabitova A.N. and senior lecturer Bakirov L.S. took International advanced training courses under the RITA program – «Changes in the region» on the basis of the Higher University of Economics (Bydgoszcz, Poland). The received certificates gave teachers the opportunity to conduct training seminars among teaching staff, AUP, university students (600 students). According to the results of the implementation of the RITA program – «Changes in the region», a joint publication of a scientific article in the Web of Science and Scopus database is planned

#### 2.4 Information about teaching staff implementing the educational program

<b>№</b>	<b>Indicators</b>	<b>units of measurement</b>	<b>2023-2024 academic year</b>	<b>2024-2025 academic year</b>	<b>2025-2026 academic year</b>	<b>2026-2027 academic year</b>
1	The share of teaching staff with an academic degree in EP	%	10	10	20	20
2	Including the share of teaching staff with a degree in the general education disciplines cycle	%	10	10	20	20

#### 2.5 Characteristics of the achievements of the EP

The achievements of the educational program include the preparation of bachelor's degrees and conducting scientific research on the basis of contracts concluded with specialized organizations.

For the development of practical skills of students, relevant contracts have been concluded with practice bases, in accordance with the form of a standard contract for the organization of professional practice. The bases of practices are organizations that correspond to the profile of the educational program 6B11201 «Life safety and environmental protection».

The cipher and the name of the educational program	Practice bases	Term of the contract
6B11201 «Life safety and environmental protection»	Semey construction materials LLP, Semey, Abaya region	05.04.2021 – 31.12.2023, No. 2214
	RSU «Emergency Management of the city of Semey» Department of Emergency Situations of the East Kazakhstan Region of the Ministry of Emergency Situations of the Republic of Kazakhstan	26.11.2021 – 18.10.2026, No. 181
	Semipalatinsk Oil Plant LLP	15.06.2022 – 31.12.2025, No.210
	RSE «National Nuclear Center of the Republic of Kazakhstan»	10.08.2022 – 10.08.2027, No. 531
	Ministry of Emergency Situations of the Republic of Kazakhstan «Abai territorial Operational Management» branch of the State Institution «Kazselezashchita»	17.10.2022 – 01.09.2027, No. 406

### 3. The main objectives of the EP development plan

№	Main tasks	Deadlines for implementation	Events
1	Improvement and improvement of conditions for obtaining a full-fledged, high-quality professional education	The entire training period	Development of measures to improve educational services and develop professional skills



2	Involvement of employers/stakeholders in the process of improving the educational program for determining the professional competencies of a graduate, preparation of educational and methodological support for disciplines proposed by employers	The entire training period	Annual review and updating of the content of the educational program based on the recommendations of employers
3	Expansion of relations with partners in order to implement dual education and the publication of educational and methodological literature	The entire training period	Development of measures for the implementation of dual education and the publication of educational and methodological literature
4	Creation of prerequisites for independent research activity of the student within the framework of research at all stages of training	The entire training period	Conducting scientific events (conferences, seminars, round tables) Preparation participation of students in Olympiads
5	Involvement of employers in the selection of topics in the writing of theses, the execution of theses by order of employers	The entire training period	Formation of a list of relevant and significant topics, taking into account the proposals of employers
6	Improving the educational, methodological and logistical support of the educational program	The entire training period	Increase in the volume of available educational and methodological literature in the state language, creation of specialized classrooms

#### 4. Risk analysis of EP

The graduating Department of Chemical Technology and Ecology, when implementing the educational program 6B11201 «Life safety and Environmental protection», takes certain measures to reduce the potential risks presented in the table.

No	Name of risks	Measures to eliminate
1	Decrease in the number of students enrolled in the educational program	Introduction of more effective forms of career guidance in urban and inter-district schools of the Abai region with the involvement of students; Instagram facebook, Facebook, etc.). Maintaining the contingent (psychological support of students during the training period, individualization of training, motivation to continue training, etc.). Improving the effectiveness of PR services (media appearances, publications on instagram, facebook)
2	Insufficient level of language knowledge for the introduction of trilingual education	Organization of English language courses among students of 1-3 courses. Taking educational courses on the Coursera platform among students of 2-3 courses in the state and Russian languages in order to gain new knowledge on the basis of the largest universities in the World.
3	Decrease in the level of employment	analysis of the labor market and the demand for specialists; formation of a positive image of the educational program (through the release of highly qualified specialists, the introduction of research results)
4	Insufficient development of external and internal academic mobility of students and teaching staff	Organization of external academic mobility of teaching staff of the department on the basis of NAO «S. Amanzholov VCU», NAO «D. Serikbayev EKSTU»

### 5. Action plan for the development of the educational program

No	Criteria	Expected results	units of measurement	2023-2024	2024-2025	2025-2026	2026-2027
<b>Direction 1. Educational and methodological support</b>							

1.1	Updating the educational program based on professional standards, taking into account the recommendations of employers	Conducting an examination of the Educational program 6B11201 «Life safety and environmental protection» in order to improve the practice orientation and development of professional competencies of graduates	fact.	fact.	fact.	fact.	fact.
1.2	Monitoring and updating catalogs of elective disciplines in accordance with the development of key and professional competencies, the demands of the labor market	Improving the quality of the content of educational programs by including elective courses aimed at developing key and professional competencies of graduates in accordance with the demands of the labor market.	fact.	fact.	fact.	fact.	fact.
1.3	Introduction of modern learning technologies into the educational process, contributing to the development of cognitive activity, communicative ability of students	Improving the quality of teaching academic disciplines, taking into account the novelty and variety of forms of work that contribute to the development of cognitive activity.	fact.	fact.	fact.	fact.	fact.
1.3.1	Introduction of mass open online courses (MOOCs) into the educational process according to the educational program 6B11201 «Life safety and environmental protection»	Introduction of disciplines into the educational process Improving the quality of teaching academic disciplines, taking into account the novelty and diversity of forms of work that contribute to the development of cognitive activity.	unit	1	1	1	1
1.4	Involvement of social partners and employers in the development, examination of the implementation of educational programs	Improving the quality of educational programs implemented taking into account market demands and recommendations of employers	unit	3	3	3	3

1.5	Development and implementation of elective courses in English	Introduction of disciplines in English into the educational process	unit	-	-	-	-
1.6	Conducting seminars and round tables on the application of innovative technologies in the educational process	Introduction of innovative technologies in the educational process	unit	2	2	2	2
1.7	Publication of educational, methodical and scientific literature on the implemented educational program	Improvement of educational and methodological support in the disciplines of the implemented educational programs	unit	2	2	2	2
1.8	Conclusion of contracts with foreign and domestic partner universities in order to develop academic exchange of students of all levels and teaching staff	Creation of a database of foreign and domestic partner universities for the development of academic exchange of students of all levels and teaching staff	unit	1	1	1	1
1.9	Inviting students from partner universities to study for a semester, short-term internships, internships and others	Development of international recognition of educational programs, implementation of academic mobility programs for students	number of people	1	1	1	1
1.10	Participation of teaching staff and students in international academic exchange programs	Development of international cooperation with foreign universities implementing educational programs in the field of Life safety and environmental protection	number of people	-	-	-	-
1.11	Development of outgoing academic mobility of teaching staff and students in the direction of Life safety and environmental protection	Improvement of the educational program based on the use of the experience of implementing such programs in leading foreign universities	number of people	1	1	1	1
<b>Direction 2. Teaching staff</b>							

2.1	Professional development and training of scientific and pedagogical personnel for the implementation of educational programs once every 5 years	The share of teaching staff who have passed advanced training at the national and international level is at least 20%	number of people	2	2	2	2
2.2	Advanced training, retraining, internships of teaching staff at the international level	Completion of at least 2 teachers of the advanced training program, retraining, internships of teaching staff at the international level	number of people	1	1	1	1
2.3	Promotion of publications of the works of teaching staff in international publications indexed by the Web of Science and Scopus databases	Increase in the share of teaching staff who have published the results of scientific research in publications indexed by the Web of Science and Scopus databases – at least 30% of the total number of teaching staff	%	10	10	10	10
2.4	Involvement of practical specialists in teaching and scientific activities	Participation in the implementation of educational programs of practitioners (at least 20% of specialists)	%	10	10	10	10

### Direction 3. Internationalization of educational programs

3.1	Conclusion of agreements on international cooperation with foreign universities	Implementation of joint projects, preparation of scientific publications with foreign partners, creation of bases for scientific internships of students	unit	-	1	-	1
3.2	Attracting foreign students to study under the educational program 6B11201 «Life safety and environmental protection»	Increasing the number of foreign students	number of people	-	-	-	-

3.3	Organization of joint scientific and practical events with international partners	Improving the efficiency of scientific and methodological activities of teaching staff, exchange of experience with foreign partners	unit	-	1	-	1
3.4	Invitation of foreign specialists to give lectures and consultations on master's projects and dissertations	Improvement of the content component of educational programs based on the introduction of the experience of foreign specialists in the implementation of educational programs	unit	-	-	-	-
3.5	Expansion of cooperation with Leading foreign scientific and educational organizations in order to attract the most qualified foreign specialists to the implementation of educational programs	Formation of key and professional competencies in accordance with the practice of leading universities	unit	-	-	-	-
<b>Direction 4. Logistics and digitalization</b>							
4.1	Step-by-step equipment of classrooms with technical training tools (projectors, panels, interactive and multimedia whiteboards, multifunction devices, webcam, projector screen, etc.)	Equipping classrooms assigned to the department with technical training tools (projectors, panels, interactive and multimedia whiteboards, multifunctional devices, webcam, projector screen, etc.)	unit	2	2	2	2
4.2	Automation of the educational process (testing, session management, student contingent movement, dean's office, department, teaching staff workload, schedule, library, syllabuses)	Information management based on the automation of the educational process (testing, session management, student body movement, dean's office, department, teaching staff workload, schedule, library, syllabuses)	fact.	fact.	fact.	fact.	fact.

4.3	Replenishment of the full-text database of research results of teaching staff and students, teaching staff (articles, monographs and others)	Increase in the number of results of scientific works of scientists, research of teaching staff and students, teaching staff (articles, monographs and others)	unit	1	1	1	1
4.4	Expansion of the fund of scientific and educational literature, including on electronic media for implemented educational programs	Ensuring the implementation of educational programs based on modern educational and information resources, including on electronic media	unit	1	1	1	1
4.5	Monitoring the content and improvement of the faculty's website	Formation of the faculty's website on various aspects of the implementation of educational programs.	%	80	85	90	90

Head of the Department Chemical technology and ecology *A.A.* Sabitova A.N.

**REVIEWED**

at the meeting of the Quality Assurance Commission of the Faculty of Engineering and Technology

Protocol of the meeting No. 5 dated 05/25/2023

Chairman *G.B.* Abdilova G.B.

**AGREED**

Dean of the Faculty *H.G.* Nurytkhan G.N.  
«25» May 2023