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**Ministry of Science and Higher Education of Kazakhstan Republic  
Pavlodar Pedagogical University named after Alkey Margulan**



Approved by the Dean of  
the Higher School of Natu-  
ral Sciences

E. Gabdullin

2023

**DEVELOPMENT PLAN**

Educational program “6B01550 Biology”  
for 2023-2027

Approved at the meeting  
Quality Committee  
from 26.05 2023,  
protocol No. 6

Pavlodar

## **Analysis of the educational program 6B01550 “Biology”**

The educational program 6B01550 “Biology” trains highly qualified scientific and pedagogical personnel in biology for education and various branches of biological sciences who are able to apply, evaluate and analyze the current state of development of education and science, capable of making effective decisions in professional activities.

The educational program 6B01550 “Biology” was developed in accordance with the State Educational Standard of the Republic of Kazakhstan, the Professional Standard of a Teacher, the National Qualifications Framework, and is consistent with the Dublin descriptors and the European Qualifications Framework.

The educational program is formed on the basis of a competency-based approach to design and has a modular format.

The uniqueness of EP 6B01550 “Biology”: the educational program includes disciplines corresponding to the sections of the program for general secondary education with updated content, such as “Structure and functions of living organisms”, “Diversity of living organisms” and others. The educational program has a trajectory of Natural Science. Recently, various types of non-scientific types of knowledge have become increasingly widespread. Therefore, it is important to establish natural science knowledge in society. We are talking about mastering the basic concepts in the field of physics, chemistry, biology and other natural sciences, gaining ideas about the most important schools and directions in the development of modern natural science. This trajectory makes it possible for future teachers to develop a natural-scientific way of thinking and a holistic worldview, which will help them better master the teaching profession. Completion of the course will allow graduates to teach classes in the subject “Natural Science” in secondary schools.

Requirements for admission of students to an educational program are determined by the Standard Rules for Admission to Study in Educational Organizations Implementing Educational Programs of Higher and (or) Postgraduate Education.

Applicants entering the educational program (EP) take the Unified National Testing (UNT) and a special exam in pedagogy.

Possibility of further continuing education - master's degree in OP "Biology".

Awarded degree: Bachelor of Education in the educational program 6B01550-Biology.

**The purpose of the educational program 6B01550 “Biology”** is training to prepare a biology and science teacher with subject knowledge, research and entrepreneurial skills, ready to manage relationships.

### **EP tasks:**

- formation of professional knowledge and understanding in the field of biology and natural sciences;
- creating conditions for self-development, self-training and self-education of the personality of biology students;
- development of the ability to adapt to changes in the educational environment;
- formation of entrepreneurial skills, leadership and management qualities;
- education in the spirit of patriotism, tolerance and empathy.

Bachelors in educational program 6B01550 "Biology" possess education in the field of natural sciences, analytical and communication skills, research skills and teaching skills applicable to a wide range of professions in the field of science and education.

Structure and content of the educational program 6B01550 "Biology" developed with the participation of highly qualified teaching staff of the university.

The EP development plan is formed taking into account the availability of financial, information, labor, material and technical resources, and is based on the mission of the university in accordance with the principles, goals, and objectives. Tasks for the implementation of the EP are discussed annually at a meeting of the Higher School of Economics and approved by the Faculty's Educational and Methodological Council. The EP development plan is consistent with the activities of the PPU Development Strategy for 2023-2027, which is focused on achieving the goals and key indicators defined by the Strategic Plans of the PPU, the Ministry of Education and Science of the Republic of Kazakhstan, and the State Education Development Program of the Republic of Kazakhstan. The head of the EP analyzes the results of monitoring and periodic evaluation of the EP development plan, which provides for:

- Changing needs of society and the professional environment.
- Analysis of student performance.
- Graduation and employment.
- Employers' satisfaction with the quality of graduates' training.
- Compliance of the educational environment and student support services with the goals of the educational program.
- Student satisfaction with the content of EP training.

In order to fully inform all stakeholders about the results of the implementation of the quality assurance policy 6B01550 "Biology" Meetings are held with the invitation of employers and students. Also, modular educational programs and plans for the development of EP are communicated to interested parties and employers for review through the website of the higher school.

Every year, students and teachers of the program participate in an academic mobility program within and abroad. Teachers of the program publish educational and methodological literature, textbooks, and electronic publications taking into account national development priorities and the university development strategy. The realism and effectiveness of this educational program has already been experimentally tested and has shown its relevance and viability.

In order to effectively implement the educational program, work is constantly being carried out to introduce active and innovative teaching methods, which helps students learn active ways of acquiring new knowledge, allows them to master a higher level of social activity, also stimulates the creative abilities of students and helps to form functional literacy.

## Development plan for the educational program 6B01550 Biology for 2023-2027

| No p/p | Events  | Period of execution  | Responsible  | Implementation mechanism   |
|--------|---|--|--|--|
| 1      | External assessment of the quality of the university's activities and the satisfaction of consumers of educational services | April 2024<br>2025, 2026   | Tulindinova G.K.,<br>Geldymamedov a E.A.                   | Preparation for accreditation of the educational program and for subsequent post-accreditation monitoring (every two years)                                      |
| 2      |   | December 2023<br>2024, 2025  | Tulindinova G.K.,<br>Geldymamedov a E.A.                   | Participation in the Atameken national ranking (annually)  |
|        |   | April 2024<br>2025, 2026   | Tulindinova G.K.,<br>Baymurzina B.Zh.                      | On an ongoing basis, involve stakeholders, students, teaching staff in the development of EP to ensure its quality (At least 5)                                  |
| 3      |   | Academic year 2023–<br>2024  | Korogod N.P.,<br>Tulindinova G.K.                          | Posting information on social networks and on the university website about various planned activities within the Biology OP (once a year)                        |
|        |   | 2023-2024,<br>2024-2025,<br>2025-2026,<br>2026-2027<br>academic year | Kabieva S.Zh.  | Conducting a survey of the quality of the educational process of employers, students and teaching staff (based on the results of the winter and spring sessions) |
| 4      | Implementation of the policy of admission and retention of students   | June,<br>2024-2026   | Tulindinova G.K.,<br>Asylbekova G.E.,<br>Gabdulkhaeva B.B. | Bring the indicative enrollment plan to 50% of students  |
| 5      |   | September,<br>2024-2027  | Tulindinova G.K.,<br>Asylbekova G.E.,<br>Gabdulkhaeva B.B. | The share of students studying under state orders from the total number of students is up to 80%.  |
| 6      |   |  |  |  |
| 7      |   |  |  |  |
| 8      | Vocational guidance, agitation, early profiling of school, lyceum, and college  | 2023-2024,<br>2024-2025,<br>2025-2026,<br>2026-2027                  | Teaching staff<br>EP Biology                               | The share of coverage of schools, lycées, and colleges in the region with career guidance activities is up to 100%   |

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|        | students for the teaching profession  | academic year  |  |  |
| 9      |   | 2023-2024, 2024-2025, 2025-2026, 2026-2027 academic year       | Teaching staff EP Biology  | Annual formation of a database of school and college graduates focused on the teaching profession from among those who have undergone psychological and pedagogical diagnostics up to 100% |
| 9      |   | 2023-2024, 2024-2025, 2025-2026, 2026-2027 academic year       | Teaching staff EP Biology  | Conducting image publications in the media, appearances on TV and radio up to 7 events, maintaining your own social networks (Instagram)   |
| 10     | Providing the labor market with competitive specialists   | June, 2023-2024, 2024-2025, 2025-2026, 2026-2027 academic year | Teaching staff EP Biology  | The share of graduates who studied under the state educational order and were employed in the first year after graduation in their specialty is up to 95%                                  |
| eleven |   | Annually   | Teaching staff EP Biology  | Student performance up to 95%  |
|        | Modernization of the content of higher education in the context of global trends.   | June 2024  | Tulindinova G.K., Gavrilova T.V.   | Introduction of 1 updated elective discipline into educational programs, taking into account the recommendations of employers  |
| 12     | Ensuring the individuality and uniqueness of the EP in accordance with national priorities and the development strategy of the University | August, 2026   | Shakeneva D.K-K.   | Draw up a plan for the development of a double-degree EP with Vytautas Magnus University (Lithuania, Kaunas)   |
| 13     |   |  |  |  |
| 14     |   |  |  |  |
| 15     |   |  |  |  |
| 16     |   | June, 2024-2027  | Tulindinova G.K., Baymurzina B.Zh.   | Adjusting the content of educational programs taking into account the transition to updated educational content before 20%   |
| 17     |   | September 2023   | Tulindinova G.K., Asylbekova G.E.  | Increase the share of teaching staff teaching disciplines in English to 20%  |
| 18     |   | September 2023   | Tulindinova G.K.,  | Number of teaching staff with 2nd higher education in the specialty "Foreign Language" (5 people from among the teaching staff of EP)  |
| 19     | September 2023  | Tulindinova G.K., Baymurzina B.Zh.                             | Increase the number of teaching staff who speak the state language at the level of teaching academic disciplines, from the total number of full-time teaching staff to 75% |  |

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| 20 |   | 2024–2025,<br>2025-2026,<br>2026-2027<br>academic year               | Tulindinova<br>G.K.,                  | Annual review of achievements of planned results.<br>Identification and reduction of risks to achieve the planned results of the EP   |
| 20 | Information and library resources   | December 2024  | Korogod N.P.,<br>Tulindinova G.K.     | Number of developed digital educational resources - electronic educational publications 1   |
|    |   | September, 2023-2027   | Korogod N.P.,<br>Tulindinova G.K.     | Constantly update information on the university website reflecting the interaction of the EP cluster with scientific organizations and educational organizations implementing similar educational programs, as well as supplement information about the specifics of the educational program. |
| 21 | Ensuring the contribution of science to accelerated economic diversification and sustainable development of the country | December 2024  | Tulindinova G.K.,<br>Zhumabekova B.K. | Number of laboratories certified and accredited by accreditation and certification centers (1)  |
| 22 |   | 2023-2024,<br>2024-2025,<br>2025-2026,<br>2026-2027<br>academic year | Teaching staff<br>EP Biology          | Participation in competitive events held at the university and stimulating the research activities of students and young scientists(at least 1 per year).   |
| 23 |   | Annually   | Teaching staff<br>EP Biology          | Conducting joint scientific research with universities and research centers in Kazakhstan and abroad (at least 1 per year).   |
| 24 |   | Annually   | Teaching staff<br>EP Biology          | Share of teaching staff participating in the implementation of fundamental and applied projects (5% of the university teaching staff)   |
| 25 |   | 2023-2024,<br>2024-2025,<br>2025-2026,<br>2026-2027<br>academic year | Teaching staff<br>EP Biology          | Share of publications in scientific journals with a non-zero impact factor (10% of the university's teaching staff)   |
| 26 |   | Annually   | Teaching staff<br>EP Biology          | Number of published monographs based on the results of scientific research (1)  |
| 27 |   | 2023-2024,<br>2024-2025,<br>2025-2026,<br>2026-2027<br>academic year | Teaching staff<br>EP Biology          | The number of winners (awarded first, second and third degrees) of republican and international scientific conferences, olympiads, competitions (10 students).  |
| 28 |   | Annually   | Tulindinova G.K.,<br>Korogod N.P.     | The share of full-time students involved in the scientific activities of the university should be increased to 30%  |
| 29 | Increasing civic activity of youth and  | Constantly   | Aliyasova V.N.                        | Carrying out events aimed at promoting the idea of "Zhana Kazakhstan" and   |

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|        | nurturing new Kazakhstani patriotism in the context of the national idea "Mangilik El"    |  |                                 | fulfilling the objectives of the Messages of the President of the Republic of Kazakhstan (training seminars, round tables, promotions, meetings, etc.)  |
| thirty |   | 2023-2024, 2024-2025, 2025-2026, 2026-2027 academic year | Aliyasova V.N.                  | The share of those involved in socially useful activities (volunteer movement, cleaning city areas, helping veterans, etc.) should be increased to 45%  |
| 31     |   | January, 2024-2025 academic year                         | Aliyasova V.N.                  | Share students (20%) participating in the implementation of socially significant projects of the region and the republic, within the framework of the state social order (the "Zhasyl El" program, the KVN league, debate movement, youth forums, youth leadership schools, volunteering, etc.) |
| 32     |   | Constantly   | Aliyasova V.N.                  | Percentage of students (35%) participating in activities youth organizations (Zhas Otan, Alliance of Students of Kazakhstan, Student Government, etc.)  |
| 33     |   | 2023-2024, 2024-2025, 2025-2026, 2026-2027 academic year | Aliyasova V.N.                  | Conducting a set of outreach activities to prevent crime and disseminate the ideas of destructive religious sects among young people with the involvement of law enforcement agencies and the clergy (training seminars, round tables, promotions, meetings, etc.) (once per academic year)     |
| 34     |   | September 2023   | Aliyasova V.N.                  | Carrying out a set of awareness-raising activities to prevent crime and spread the ideas of destructive religious sects among young people with the involvement of law enforcement agencies and the clergy (training seminars, round tables, promotions, meetings, etc.) (2 times per year)     |
| 35     | Coverage of youth with cultural, leisure and preventive activities to reduce social risks | Constantly   | Aliyasova V.N.                  | The share of students involved in the work of clubs is 30%  |
| 36     |   | Constantly   | Aliyasova V.N.                  | The share of students involved in sports sections is 35%  |
| 37     |   | January, 2024-2025 academic year                         | Aliyasova V.N.                  | The share of students participating in regional, republican and international creative competitions, shows, intellectual games, sports competitions and tournaments -20%  |
| 38     | Strengthening human resources and   | 2023-2024, 2024-2025, 2025-2026,                         | Tulindinova G.K., Kabieva S.Zh. | Staffing of the teaching staff according to the staffing schedule is 100%   |

|    |   |       |  |                                 |  |
|----|---|-------|--|---------------------------------|--|
|    | increasing efficiency   | labor | 2026-2027 academic year                                  |                                 |  |
| 39 |   |       | August 2023  | Tulindinova G.K., Kabieva S.Zh. | Staffing of full-time teaching staff of EP from the total number of employees, including in each area of training 100%   |
| 40 |   |       | January, 2024-2025 academic year                         | Tulindinova G.K., Kabieva S.Zh. | 100% staffing of teaching staff of EP with basic education   |
| 41 |   |       | Constantly   | Tulindinova G.K., Kabieva S.Zh. | Staffing of teaching staff of EP with academic degrees and titles from regular teaching staff is 50%   |
| 42 |   |       | Constantly   | Tulindinova G.K., Kabieva S.Zh. | Irreducible percentage of teaching staff degree OP 50%   |
| 43 | Increasing the scientific potential and level of methodological and fundamental training of university teaching staff through advanced training, internships in scientific centers of the republic and abroad |       | 2023-2024, 2024-2025, 2025-2026, 2026-2027 academic year | Korogod N.P., Tulindinova G.K.  | The number of teaching staff who have undergone advanced training within the country at the expense of the state budget (at least 2 teaching staff annually), Master classes and open lessons on the use of innovative technologies (2 times a year) |

**Head of EP Biology**



**G. Tulindinova**

**Chairman of the Quality Committee  
of the Higher School of Natural Science**



**S. Kabieva**