

Ministry of Science and Higher Education of the Republic of Kazakhstan
Non-profit JSC «Korkyt Ata Kyzylorda University»

APPROVED

Chairperson of the
Academic Quality Committee of
the Institute of Natural Sciences
N.A. Akhataev
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GRADUATE MODEL

Educational program 6B01517

«Biology»

bachelor

Kyzylorda, 2024

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INTRODUCTION

The development of a graduate competence model, which implements the main directions of the Bologna Process, is intended to answer the question of what professional tasks a specialist of a certain level (position) and a certain profile should be able to solve. The formation of a modern model of a university graduate that meets the needs of stakeholders and all interested parties is the main strategic goal of Korkyt Ata University and is supported by the staffing, educational and methodological, information, and material and technical resources necessary for the educational process. The university pursues a targeted personnel policy and systematically improves its material and technical base in order to ensure high-quality training of bachelor's graduates in demand on the labor market.

1. Description of the educational program 6B01517-Biology.

The «Biology» educational program is aimed at training bachelors of education who carry out their professional activities in the field of education. The educational program 6B01517 «Biology», within the field of training teachers in natural science subjects 6B015, offers a new approach to forming the key competencies a graduate needs. While preserving classical and traditional methods of teaching biology in the secondary education system, the educational program pays special attention to modern, innovative approaches. The implementation of this program is aimed at developing the graduate's professional competence and is based on the competence-based approach to learning, i.e. graduates must not only master knowledge, skills and abilities, but also be able to apply them in their future professional activities and be ready for independent learning and self-improvement, which is a distinctive feature of the educational program 6B01517 «Biology».

2. Component parts in the formation of the graduate model of the educational program

The main components in the formation of the graduate model of the educational program include information on the goals and objectives of the educational program, the objects, types and areas of professional activity, and the specialist competence model (Appendix 1), including descriptors, types of competencies in accordance with the educational program, and the results of the educational program.

2.1 Goals of the educational program: Training of competitive, highly qualified biology teachers for secondary schools who are capable of solving professional problems in various work situations in the field of biology, in accordance with employers' requirements and state standards in the scientific, biological or professional field.

2.2 Objectives of the educational program:

- to form the key competencies of students required for the effective performance of professional activities;
- to form the social responsibility of teachers on the basis of interpersonal values and professional ethical standards;
- to form professional knowledge and practical skills in students, taking into account the content of secondary education;
- to ensure the training of highly educated specialists with functional literacy who actively participate in the development of a society based on a healthy lifestyle.

2.3 General and profile competencies

General competencies:

- is able and ready to apply natural science, humanities, socio-economic, entrepreneurial, legal and environmental knowledge, a culture of life safety and leadership qualities in various fields;
- is ready to apply knowledge of the conceptual and theoretical foundations of biology, its place in the general system of science and values, its history and current state, fundamental biological laws and theories, and the biological essence of phenomena and processes in nature and technology;
- is able to organize and conduct a biological experiment (laboratory, demonstration, computer-based) in accordance with the theoretical and experimental foundations of biology;
- is able to use modern apparatus and equipment to carry out research field and laboratory biological work;
- is able to use domestic and foreign experience in organizing cultural and educational activities.

Profile competencies:

- is ready to apply a wide range of strategies for teaching and managing student behavior, as well as an appropriate learning strategy for a particular student;
- is able to formulate learning objectives to achieve the expected results and to prepare learning materials in accordance with the learning objectives;
- is able to conduct lessons and series of lessons using effective means, forms, methods and techniques of teaching and upbringing, as well as modern educational technologies, including e-learning, using ICT that stimulates interest in learning and cooperation;
- is able to apply the methodology of teaching biology and the forms and methods of organizing the process of teaching biology in secondary school;
- is ready to use new educational technologies, video and multimedia tools, and software in professional activities;
- is able to apply formative and summative assessment; is able to use the results of research in the field of biological and pedagogical education and to evaluate new innovative teaching strategies.

2.4 Matrix of correspondence between the learning outcomes of the educational program 6B01517 – «Biology» and the competencies being formed

Competency	ON1	ON 2	ON 3	ON 4	ON 5	ON 6	ON 7	ON 8
ЖБК1	+							
ЖБК2	+							
ЖБК3	+							
ЖБК4	+							
БК1		+						
БК2			+					
БК3			+					
			+	+				
ЖБК5	+							
БК4			+	+				
ЖБК6	+							
ЖБК7	+							
ЖБК8	+							
БК5					+			
БК6					+	+		
БК7				+	+			
							+	

БК8				+			+	
БК9				+				
БК10					+			
БК11				+				
БК12			+					
БК13			+					
БК14						+		
БК15								
БК16			+	+				
БК17			+					
БК17 minor			+	+				
КК 1							+	
КК 2				+				
			+					
БК19 minor			+	+				
КК 3					+	+		
КК 4					+	+		
траектория1 КК 5					+	+		
траектория2 КК 5				+			+	
БК20			+	+				
БК21			+				+	
			+					
БК21 minor			+	+				
траектория1 БК22				+			+	
траектория2 БК22				+		+		
					+	+		
КК 6						+	+	
КК 8				+			+	
КК 9				+	+			
					+			
траектория1 КК 10			+	+				
траектория2 КК 10					+	+		

2.5 Personal qualities of a specialist in the educational program 6B01517-Biology.

- critical thinking;
- creative thinking;
- ability to work in a team;
- ability to recognize and manage one's own and others' emotions;
- ability to form judgments and make decisions;
- ability to solve complex problems;
- responsibility in performing tasks.