



# EDUCATIONAL PROGRAM

**6B08 - Agriculture and bioresources**  
(Code and classification of the field of education)

**6B083 - Forestry**  
(Code and classification of the direction of training)

**0821**  
(Code in the International Standard Classification of Education)

**B079 - Forest resources and forestry**  
(Code and classification of the educational program group)

**6B08303 - Forest resources and hunting**  
(Code and name of the educational program)

**Bachelor**  
(Level of preparation)

**Semey**

## **Educational program**

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**bachelor**  
(Level of preparation)

## PREFACE

### Developed

The educational program 6B08303 - Forest Resources and Hunting in the direction of preparation 6B083 - Forestry on the basis of the State Compulsory Standards of Higher and Postgraduate Education approved by the Order of the Ministry of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022 No 2 (as amended by the order) was developed by the Academic Committee dated 20.02.2023 No 66).

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Head of the Academic Committee	Yessengulova Nurlygul	Dean of the Faculty of Veterinary and Agricultural Management
Educational program manager	Jamanova Gulnara	senior lecturer of the Department
Member of the AC	Akhmetova Balnur	Head of the Department of Agriculture and Bioresources"
Member of the AC	Berdikenov Bolat	Director of the Zhanasemey branch of the RSU GLPR "SEMEY ORMANY "
Member of the AC	Borissenko Yelena	Head of the Semey structural unit (representative office) of the RSE "Republican Forest Breeding and Seed Center" of the Committee of Forestry and Wildlife of the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan
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Member of the AC	Adalkan Oral	Senior Lecturer at the Department of Agriculture and Bioresources
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### Reviewing

Full name of the reviewer	Position, place of work
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### Reviewed

at the meeting of the Commission on Academic Quality of the Faculty of Veterinary Medicine and Agricultural Management by protocol No. 3 of January 09, 2024.

at a meeting of the Academic Quality Commission  
Research School of Veterinary Medicine and Agriculture.  
Recommended for approval by the University Academic Council  
Protocol No. 6 dated June 06, 2024

### Approved

at a meeting of the University Academic Council by protocol No. 6/1 of January 19, 2024.

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# 1.Introduction

## 1.1.General data

Bachelor`s degree training in the educational program B08303 "Forest resources and Hunting" is carried out at the graduate department "Agriculture and Bioresources", Faculty of Veterinary Medicine and Agricultural Management of Shakarim University.

The educational program B08303 "Forest resources and hunting" was developed taking into account the needs of the regional labor market. The educational program is focused on training a new type of personnel with broad fundamental knowledge, initiative, adaptive to the changing requirements of the labor market and technologies.

The uniqueness of the educational program B08303 "Forest resources and hunting" is that students receive practical skills in real production conditions. This is ensured by the cooperation of such organizations as the Republican State Institution "State Forest Natural Reserve "Semey Ormany", the RGC "Republican Forest Selection and Seed Breeding Center" Semey structural division and others. The educational program provides an opportunity to obtain training results and acquired competencies that meet the requirements of employers.

Graduates of the educational program B08303 "Forest resources and hunting" are able to think systematically, strategically, possess the skills to solve specific problems in the field of biodiversity conservation for traditional and emerging sectors of forestry and research activities.

Graduates of the educational program B08303 "Forest resources and hunting" provide optimization of the use and reproduction of forest resources, management of wildlife and hunting, forest management in the field of their use, protection, protection and reproduction; integrated forest zoning and modeling of commodity, bioecological productivity of forests, organization of forestry and forest management, development of optimal forest plans for the Republic of Kazakhstan.

The educational program regulates the goals, expected results, content, conditions and technologies for the implementation of the educational process, assessment of the quality of graduate training in this field of training and contains a description of the program and the direction of professional activity of the graduate, the results of training and acquired competencies, the policy of evaluating the results of training, the organization of the educational process that ensures the quality of training of students, a description of the modules that make up the educational program, methodological materials, ensuring the implementation of the appropriate educational technology.

When implementing the educational program, it is planned to use artificial intelligence tools in the educational process, thereby developing digital competencies among students in a rapidly changing technological environment.

The educational program provides for the education of a student with special educational needs in the conditions of a higher educational institution, as well as his socialization and integration into society.

## 1.2.Completion criteria

The main criterion for the completion of the educational process for the preparation of bachelors is the development by students of at least 205 credits of theoretical training, as well as at least 27 credits of practice, 8 credits of final certification. Total 240 credits.

1.3.Typical study duration: 4 years.

## 2.PASSPORT OF THE EDUCATIONAL PROGRAM

2.1.EP purpose	The purpose of the educational program is the development of students personal qualities and the formation of general cultural and professional competencies, training in demand specialists in the development and implementation of measures for multi-purpose permanent and non-depleting use of forests, management and management of hunting, prospects for wild breeding and animal husbandry, forest inventory, the use of information technologies in forestry.
<b>2.2.Map of the training profile within the educational program</b>	
Code and classification of the field of education	6B08 - Agriculture and Bioresources
Code and classification of the direction of training	6B083 - Forestry
Code in the International Standard Classification of Education	0821
Code and classification of the educational program group	B079 - Forest resources and forestry
Code and name of the educational program	6B08303 - Forest Resources and Hunting
<b>2.3.Distinctive features of the OP (double degree/joint, OVPO-partner, Double major, innovative)</b>	Double major
<b>2.4.Qualification characteristics of the graduate</b>	
Degree awarded / qualification	Bachelor of Agriculture in the educational program
Name of professional standard	"Forest business" dated 12.12.2022
Atlas of new professions	-
Regional standard	-
Name of the profession / list of positions of a specialist	Forester, assistant forester, forestry engineer, engineer of forest crops, engineer for the protection and protection of forests, taxator engineer, forest inspector, master of a forest nursery, master gardener, phyto pathologist engineer, head of hunting and production sites, leading specialist, chief specialist in the central and territorial bodies in the field of protection, reproduction and use of wildlife, head of the regime protection service in specially protected natural territories; inspector of territorial inspections.
OQF qualification level (industry qualification framework)	6
Area of professional activity	The subjects of the graduate`s professional activity are: - technology of growing planting material; - methods and methods of collecting and storing forest seeds; - systems and methods of state forest control and supervision over the use, protection, protection and reproduction of forests; - hydro-reclamation systems; - land reclamation systems; - systems and methods of forest development planning; - technological systems, means and methods of the state forest inventory;

	<ul style="list-style-type: none"> <li>- methods, methods and means of collecting, processing and analyzing quantitative and qualitative characteristics of the state of forests;</li> <li>- technological systems, means and methods of reforestation, forest care, protection and protection of forests;</li> <li>- technological systems, means and methods of afforestation to prevent water, wind and other soil erosion;</li> <li>- technological systems, means and methods of design, creation, operation, reconstruction of forest park plantations;</li> <li>- reproduction and processing of forest resources;</li> <li>- methods of non-wood products of the forest;</li> <li>- hunting farms of various forms of ownership;</li> <li>- state nature reserves;</li> <li>- zoological reserves;</li> <li>- national nature parks and reserves;</li> <li>- specially protected natural areas;</li> <li>- agricultural machinery and equipment;</li> <li>- technologies for the production of leather, fur and fur raw materials and its primary processing;</li> <li>- state institutions for the protection of forests and wildlife; republican and regional bodies of state management of the animal world and hunting economy; tourist organizations and public associations of hunters and fishermen.</li> </ul>
Object of professional activity	<p>The objects of the graduate`s professional activity are:</p> <ul style="list-style-type: none"> <li>- forest and urban ecosystems of various levels and their components: flora and fauna, soils;</li> <li>- natural and man-made forestry systems, including structures and measures that increase the usefulness of natural objects and components of nature: forest and ornamental nurseries, forest plantations, artificial forest plantations, forest parks, hydro-reclamation systems, land reclamation systems, nature protection complexes;</li> <li>- forest specially protected natural territories and other forests of high conservation value that have exceptional or particularly important ecological properties, eco-system functions and social role;</li> <li>- participants in forest relations, ensuring the planning of forest development, carrying out the use, protection, protection and reproduction of forests, carrying out state forest control and supervision of the use, protection, protection and reproduction of forests;</li> <li>- systems and methods of forest development planning, technological systems, means and methods of state forest inventory, monitoring of their condition, including methods, methods and means of collecting, processing and analyzing quantitative and qualitative characteristics of the state of forests;</li> <li>- technological systems, means and methods of reforestation, forest care, protection and protection of forests that increase forest productivity, ensure multi-purpose rational, continuous, non-depleting use of forests to meet the needs of society in forests and forest resources;</li> <li>- technological systems, means and methods of</li> </ul>

	<p>afforestation for the prevention of water, wind and other soil erosion, for the creation of protective forests, for the reclamation of man-made landscapes;</p> <ul style="list-style-type: none"> <li>- systems and methods of state forest control and supervision over the use, protection, protection and reproduction of forests;</li> <li>- technological systems, means and methods of designing, creating, operating, and reconstructing forest park stands that ensure the formation of a favorable environment for recreation, tourism and other types of recreational activities in forest areas, increasing their resistance to adverse factors and aesthetic expressiveness;</li> <li>- hunting grounds, hunting animals, hunting products, related hunting products, hunting dogs, hunting animals, hunting animals listed in the Red Book, technical means used for hunting.</li> </ul>
Types of professional activity	<p>Production and technological activities:</p> <ul style="list-style-type: none"> <li>- participation in the development and implementation of measures for multi-purpose rational, continuous, non-depleting use of forests to meet the needs of society in forests and forest resources, depending on the purpose of forests and the useful functions performed by them;</li> <li>- participation in the development and implementation of measures to preserve forests of high environmental value, to ensure environmental, water protection, protection and protection of forests, to produce planting material for forest-forming and ornamental species of trees and shrubs, to care for forests, reforestation and afforestation, recultivation of disturbed landscapes and other useful functions of forests;</li> <li>- participation in the implementation of the state forest inventory, in conducting forest management, in providing economic entities and forest and forest park management bodies with information on the state of forests, their quantitative and qualitative characteristics, in documenting information for maintaining the state forest register and cadastral accounting of forest plots;</li> <li>- participation in the development and implementation of measures for the creation, operation, reconstruction of forest park plantations that increase their resistance to adverse factors, aesthetic expressiveness, the level of comfort of human stay in the forest environment, its overall aesthetic enrichment;</li> <li>- monitoring compliance with technological discipline and proper operation of technological equipment, infrastructure structures that support the optimal mode of growth and development of vegetation at the objects of the forest complex;</li> <li>- ensuring the sustainable use of hunting animals in accordance with the current regulations, limits (quotas) and rules; conducting work on the organization of animal husbandry; organization of commodity production and procurement of fur raw materials, procurement and processing of wild</li> </ul>



products, wild animal meat ; accounting and maintaining state cadastres of the animal world and hunting grounds; be able to apply in practice scientifically based methods of hunting management; be able to properly organize the protection and reproduction of hunting and commercial, as well as rare and endangered animals; be able to use laboratory and field hunting equipment, hunting tools.

Organizational and managerial activities:

- participation in forest management (in the field of their use, protection, protection and reproduction);
- participation in the management of recreational forest management facilities (in the field of their creation, functional use, reconstruction, improvement of sanitary and hygienic and aesthetic qualities of plantings);
- participation in the implementation of state forest control and supervision of compliance by all forest users with the rules: timber harvesting and other forest resources, fire safety in forests, sanitary safety in forests, reforestation and forest care rules, calculation of the amount of damage caused to forests due to violations of forest legislation;
- organization of the work of a team of performers, making managerial decisions in the conditions of different opinions;
- finding a compromise between different requirements (cost, quality, safety and deadlines) both for long-term and short-term planning and determining the optimal solution;
- assessment of production and non-production costs during work on forest and forest park facilities;
- implementation of technical control, supervision;
- organization of the work of a team of performers;

planning and organization of production work; selection of optimal solutions when planning work in non-standard situations; control over the use of hunting grounds; participation in the assessment of the economic efficiency of economic activity; ensuring safety at the production site; be able to use educational and laboratory equipment and computer technologies for setting up a scientific experiment; be able to organize the commercial production of fur and fur raw materials; be able to organize and carry out measures to improve the breeding qualities of animals and increase the yield of offspring.

Project activities:

- participation in the development of forest development projects, in the preparation of forestry regulations taking into account environmental, economic and other parameters;
- participation in the design of individual objects of forest and forest park management (forest and ornamental nurseries, forest plantations, artificial forest plantations, forest hydro-reclamation systems, forest parks, specially protected natural territories);
- carrying out technical calculations on projects, technical-economic and functional-cost analysis of the effectiveness of the planned measures, finding compromise solutions in conditions of multi-criteria,

	<p>uncertainty, planning the implementation of the project;</p> <ul style="list-style-type: none"> <li>- participation in the development (on the basis of existing standards) of methodological and regulatory documents, technical documentation, as well as proposals and measures for the implementation of developed projects for forest and forest park facilities using information technologies;</li> <li>- the study of scientific and technical information, domestic and foreign experience on the subject of research; the use of the basic laws of natural science disciplines in professional activity; the use of methods of mathematical analysis and modeling, theoretical and experimental research; the use of basic methods of obtaining, storing, processing information in accordance with general professional competencies; to find practical application of the latest achievements of science and introduce them into practice.</li> </ul> <p>Environmental protection: organization of work on the protection, maintenance of the number and rational use of resources of hunting animals; conducting explanatory work among hunters and the local population on the issues of careful attitude to natural resources, their correct and rational use, compliance with existing rules and regulations in the hunting economy.</p> <p>Cultural and educational: to organize and conduct explanatory work among hunters and the local population on the issues of caring for natural resources, the correct and rational use of them; the desire for self-development, improving their skills and skills, acquiring new knowledge in the field of hunting; to be ready to perceive the culture and customs of other countries and peoples; to be tolerant of national, racial, confessional differences, the ability to intercultural communication; the ability to extract and analyze information from various sources; knowledge of a foreign language for communication in the educational, scientific, professional and socio-cultural sphere.</p>
<p><b>2.5. Graduate Model</b></p>	<p>A person with professional competencies in planning and implementing the protection, protection and reproduction of forests, their use, monitoring the condition, inventory and cadastral accounting in natural, man-made and urbanized landscapes, forest management to ensure multi-purpose, rational, continuous and sustainable use of forests to meet the needs of society in forests and forest resources, state forestry control and supervision. A specialist with personal qualities: active, a dynamic, receptive, responsible, reliable, competitive, potential employee.</p>

### **3. Modules and content of the educational program**

#### **Module 1. Fundamentals of social and humanitarian knowledge**

##### **Brief description of the module content**

This module reveals such aspects as: socio-cultural, economic-legal, environmental knowledge, communication skills, the use of information technology taking into account modern trends in the development of society.

##### **Module disciplines**

Foreign language

History of Kazakhstan

Kazakh(Russian) language (1)

Bases of economics, law and ecological knowledge

Physical Culture

Foreign language

Kazakh(Russian) language (2)

The module of socio-political knowledge (sociology, political science, cultural studies, psychology)

Physical Culture

Information and communication technology

Physical Culture

World of Abai

Physical Culture

Philosophy

#### **Module 2. Informatization of forestry**

##### **Brief description of the module content**

The content of the module includes a set of methods and tools used for the collection, storage, processing and dissemination of information, the introduction of geoinformation programs, the purpose of which is to predict, model and protect forestry in a timely manner.

##### **Module disciplines**

Geographic Information Systems

Engineering geodesy

Engineering and computer graphics

Aerospace methods in forestry

Forest pyrology

Ornithology

Digitalization in forestry

#### **Module 3. Biological diversity**

##### **Brief description of the module content**

The module combines disciplines that study the genetic, species and ecosystem diversity of animal, plant and other life forms, and how they interact with each other in their natural environments.

##### **Module disciplines**

Systematics of lower plants

Forest botany

Systematics of higher plants

Animal biology

Biotechnological and breeding of game birds

#### **Module 4. Increasing forest productivity**

##### **Brief description of the module content**

The module studies the conservation and improvement of integrated forest productivity through the application of a system of economic measures differentiated depending on the region conditions and the intended purpose of

forestlands.

#### **Module disciplines**

Introduction to the specialty

Educational practice

Dendrology

Forest Biometrics

Forestry

Seed business

### **Module 5. Forestry logging technology and machines**

#### **Brief description of the module content**

The module contains disciplines aimed at using machines and technological processes that use resource-saving technologies in logging production.

#### **Module disciplines**

Mechanization of forest operations

The system of machines in forestry

Operation of the machine park

Hydrothermal wood processing and protection

Technology and equipment of sawmill production

Wood processing technology and commodity science

### **Module 6. Protection of forests from harmful organisms, ensuring sanitary safety in forests**

#### **Brief description of the module content**

The content of the module includes disciplines aimed at providing knowledge on the protection of the state forest fund from pests and diseases, ensuring systematic monitoring of its condition, identification of foci, measures for prevention, localization and elimination of dangerous factors.

#### **Module disciplines**

Forest Entomology

General Entomology

Production practice 1

Sylvulas

Diseases of animals and birds

Forest phytopathology

Forest protection

Forest crops

### **Module 7. Greening and protection of national resources**

#### **Brief description of the module content**

The module is a set of works on engineering training, placement of architectural forms, design of landscaping, landscape improvement, protection and protection carried out in order to bring the territory to its intended use.

#### **Module disciplines**

Reserved business

Landscape design

National natural parks and reserves of Kazakhstan

Landscaping of populated areas

Protection of animals and birds

Floriculture and greenhouse business

### **Module 8. Soil and forest monitoring**

#### **Brief description of the module content**

The content of the module includes disciplines studying soil fertility, their compliance with the requirements of forest crops, indicators of chemical, physical and water-physical properties of soils, indicators of soil pollution, types of erosion

and deflation of soils, in order to be able to control, manage, predict and improve the condition of forestlands.

#### **Module disciplines**

Soil Bonitization

Land resources

Forest soil science

Aerial forest reclamation

Forest reclamation

Chemical reclamation

Production practice 2

Radioecological rationing in forestry

Forest meteorology

### **Module 9. Sustainable forest management**

#### **Brief description of the module content**

The module is a system whose purpose is to form measures regulating impacts on forests, ensuring the achievement and stable maintenance of their target dynamics, ensuring continuous non-exhausting multi-purpose forest management, conservation and improvement of productivity, sustainability and biodiversity of forests.

#### **Module disciplines**

Forest taxation

Assessment and accounting of forest plant resources

Forest management

Secondary use

Rational use of natural resources

Inspection activities in hunting science

Forest commodity science

Forest management

### **Module 10. Use of hunting resources**

#### **Brief description of the module content**

The basis of the module is the content of disciplines studying the conservation and use of hunting resources and their habitat, the creation of a hunting infrastructure, the purpose of which is to ensure species diversity and conservation of the number of game animals and birds.

#### **Module disciplines**

Hunting management in modern conditions

Forest legislation

Rationing the use of hunting resources

Organization of inturohota

Hunting and commercial bioresources

Ecology of game animals and birds

### **Module 11. Current state of forest resources**

#### **Brief description of the module content**

The module provides a comprehensive view of the world's forests and how this resource is changing; its detailed global picture contributes to the formation of sound policies, practices and investments affecting forests and forestry in the global space based on legislation.

#### **Module disciplines**

Forest Management

Methodology of scientific research in forestry

Forest economy

World forest resources

Recreational resources and tourism

Logging technology and wood science

Economics and management at the enterprise (forest complex)

Industry economics

Pre-graduate practice

Production practice 3

## **Final examination**

### **Brief description of the module content**

Writing and defending a thesis or preparing and passing a comprehensive exam.

### **Module disciplines**

Graduate work

Comprehensive exam

## 4. Summary table on the scope of the educational program

### «6B08303 - Forest Resources and Hunting»

Name of discipline	Cycle/ Component	Term	Number of credits	Total hours	Lec	SPL	LC	IWST	IWS	Knowledge control form
<b>Module 1. Fundamentals of social and humanitarian knowledge</b>										
Foreign language	GER/CC	1	5	150		45		35	70	Examination
History of Kazakhstan	GER/CC	1	5	150	15	30		35	70	Qualification examination
Kazakh(Russian) language (1)	GER/CC	1	5	150		45		35	70	Examination
Bases of economics, law and ecological knowledge	GER/US	1	5	150	15	30		35	70	Examination
Physical Culture	GER/CC	1	2	60		60				Differentiated attestation
Foreign language	GER/CC	2	5	150		45		35	70	Examination
Kazakh(Russian) language (2)	GER/CC	2	5	150		45		35	70	Examination
The module of socio-political knowledge (sociology, political science, cultural studies, psychology)	GER/CC	2	8	240	30	45		55	110	Examination
Physical Culture	GER/CC	2	2	60		60				Differentiated attestation
Information and communication technology	GER/CC	3	5	150	15	15	15	35	70	Examination
Physical Culture	GER/CC	3	2	60		60				Differentiated attestation
World of Abai	BS/US	3	3	90	15	15		20	40	Examination
Physical Culture	GER/CC	4	2	60		60				Differentiated attestation
Philosophy	GER/CC	5	5	150	15	30		35	70	Examination
<b>Module 2. Informatization of forestry</b>										
Geographic Information Systems	BS/CCh	2	3	90	15	15		20	40	Examination
Engineering geodesy	BS/CCh	2	3	90	15	15		20	40	Examination
Engineering and computer graphics	BS/CCh	2	3	90	15	15		20	40	Examination
Aerospace methods in forestry	BS/CCh	4	5	150	15	30		35	70	Examination
Forest pyrology	BS/CCh	4	5	150	15	30		35	70	Examination
Ornithology	BS/US	4	5	150	15	30		35	70	Examination
Digitalization in forestry	BS/CCh	4	5	150	15	30		35	70	Examination
<b>Module 3. Biological diversity</b>										
Systematics of lower plants	BS/CCh	1	5	143	15	15	8	35	70	Examination
Forest botany	BS/CCh	1	5	150	15	15	15	35	70	Examination
Systematics of higher plants	BS/CCh	1	5	143	15	15	8	35	70	Examination

Animal biology	BS/US	3	5	150	15	30		35	70	Examination
Biotechnological and breeding of game birds	AS/US	5	5	150	15	30		35	70	Examination
<b>Module 4. Increasing forest productivity</b>										
Introduction to the specialty	BS/US	1	3	90	15	15		20	40	Examination
Educational practice	BS/US	2	2	60						Total mark on practice
Dendrology	BS/US	3	5	150	15	15	15	35	70	Examination
Forest Biometrics	BS/US	4	3	90	15	15		20	40	Examination
Forestry	BS/US	4	5	150	15	30		35	70	Examination
Seed business	BS/US	4	5	143	15	15	8	35	70	Examination
<b>Module 5. Forestry logging technology and machines</b>										
Mechanization of forest operations	BS/CCh	3	5	150	15	30		35	70	Examination
The system of machines in forestry	BS/CCh	3	5	150	15	30		35	70	Examination
Operation of the machine park	BS/CCh	3	5	150	15	30		35	70	Examination
Hydrothermal wood processing and protection	AS/CCh	7	5	150	15	30		35	70	Examination
Technology and equipment of sawmill production	AS/CCh	7	5	150	15	30		35	70	Examination
Wood processing technology and commodity science	AS/CCh	7	5	150	15	30		35	70	Examination
<b>Module 6. Protection of forests from harmful organisms, ensuring sanitary safety in forests</b>										
Forest Entomology	BS/CCh	3	5	150	15	15	15	35	70	Examination
General Entomology	BS/CCh	3	5	150	15	15	15	35	70	Examination
Production practice 1	BS/US	4	5	150						Total mark on practice
Sylvulas	BS/US	5	5	150	15	15	15	35	70	Examination
Diseases of animals and birds	BS/CCh	5	5	150	15	15	15	35	70	Examination
Forest phytopathology	BS/CCh	5	5	150	15	15	15	35	70	Examination
Forest protection	BS/CCh	5	5	150	15	15	15	35	70	Examination
Forest crops	AS/US	6	5	150	15	15	15	35	70	Examination
<b>Module 7. Greening and protection of national resources</b>										
Reserved business	BS/CCh	6	5	150	15	30		35	70	Examination
Landscape design	BS/CCh	6	5	150	15	30		35	70	Examination
National natural parks and reserves of Kazakhstan	BS/CCh	6	5	150	15	30		35	70	Examination
Landscaping of populated areas	BS/CCh	6	5	150	15	30		35	70	Examination
Protection of animals and birds	BS/CCh	6	5	150	15	30		35	70	Examination
Floriculture and greenhouse business	BS/CCh	6	5	150	15	30		35	70	Examination
<b>Module 8. Soil and forest monitoring</b>										



Soil Bonitization	BS/CCh	2	5	150	15	15	15	35	70	Examination
Land resources	BS/CCh	2	5	150	15	15	15	35	70	Examination
Forest soil science	BS/CCh	2	5	150	15	15	15	35	70	Examination
Aerial forest reclamation	BS/CCh	5	5	150	15	30		35	70	Examination
Forest reclamation	BS/CCh	5	5	150	15	30		35	70	Examination
Chemical reclamation	BS/CCh	5	5	150	15	30		35	70	Examination
Production practice 2	BS/US	6	5	150						Total mark on practice
Radioecological rationing in forestry	BS/CCh	7	3	90	15	15		20	40	Examination
Forest meteorology	AS/CCh	7	3	90	15	15		20	40	Examination
<b>Module 9. Sustainable forest management</b>										
Forest taxation	BS/CCh	5	5	150	15	30		35	70	Examination
Assessment and accounting of forest plant resources	BS/CCh	5	5	150	15	30		35	70	Examination
Forest management	BS/CCh	6	5	150	15	30		35	70	Examination
Secondary use	BS/CCh	6	5	150	15	30		35	70	Examination
Rational use of natural resources	BS/CCh	6	5	150	15	30		35	70	Examination
Inspection activities in hunting science	AS/CCh	7	5	150	15	30		35	70	Examination
Forest commodity science	AS/CCh	7	5	150	15	30		35	70	Examination
Forest management	AS/CCh	7	5	150	15	30		35	70	Examination
<b>Module 10. Use of hunting resources</b>										
Hunting management in modern conditions	AS/CCh	7	5	150	15	30		35	70	Examination
Forest legislation	AS/CCh	7	5	150	15	30		35	70	Examination
Rationing the use of hunting resources	AS/CCh	7	5	150	15	30		35	70	Examination
Organization of inturohota	AS/CCh	7	5	150	15	30		35	70	Examination
Hunting and commercial bioresources	AS/CCh	7	5	150	15	30		35	70	Examination
Ecology of game animals and birds	AS/CCh	7	5	150	15	30		35	70	Examination
<b>Module 11. Current state of forest resources</b>										
Forest Management	AS/US	6	5	150	15	30		35	70	Examination
Methodology of scientific research in forestry	BS/US	7	4	120	15	30		25	50	Examination
Forest economy	AS/CCh	7	5	150	15	30		35	70	Examination
World forest resources	AS/CCh	7	5	150	15	30		35	70	Examination
Recreational resources and tourism	AS/CCh	7	5	150	15	30		35	70	Examination
Logging technology and wood science	AS/CCh	7	5	150	15	30		35	70	Examination
Economics and management at the enterprise (forest complex)	AS/CCh	7	5	150	15	30		35	70	Examination
Industry economics	AS/CCh	7	5	150	15	30		35	70	Examination

Pre-graduate practice	AS/CCh	8	15	450						Total mark on practice
Production practice 3	AS/CCh	8	15	450						Total mark on practice
<b>Final examination</b>										
Graduate work		8	8	240						
Comprehensive exam		8	8	240						

**NON -PROFIT LIMITED COMPANY «SHAKARIM UNIVERSITY OF SEMEY»**

**EDUCATIONAL PROGRAM DEVELOPMENT PLAN**  
**«6B08303 – Forest resources and hunting»**  
for 2024 -2028 years

Semey 2024

## Content

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## 1. Passport of the development plan of the educational program «6B08303 – Forest resources and hunting»

1	Basis for development	Development program of the Non -Profit Limited Company «Shakarim University of Semey» for 2023-2029. Plan work faculty
2	Timing implementation	2024 -2028 gg.
3	Expected results implementation	<ul style="list-style-type: none"><li>- provision of educational services at the level of world educational standards that ensure the competitiveness of graduates in the labor market;</li><li>- training of intellectually developed, creative specialists by integrating the educational process, scientific research, and innovation;</li><li>- training of qualified and competitive personnel for forestry in accordance with the requirements of national and international standards</li></ul>

## 2. Analytical justification EP

### 2.1 Information about the educational program

The educational program is developed in accordance with the National Qualifications Framework and professional standards, in accordance with the Dublin Descriptors and the European Qualifications Framework.

The typical term for mastering the educational program of a bachelor's degree is 4 years.

EP "6B08303 - Forest resources and game management" was developed by the Academic Committee.

The main criterion for the completion of the educational process is the development of at least 240 credits, with the award of the degree "Bachelor of Agriculture in the educational program" 6B08303 - Forest Resources and Game Science "

## 2.2 Information about students

Academic year Foundation of	2024-2025 academic year	2025-2026 academic year	2026-2027 academic year	2027-2028 academic year
Grant	98	100	105	110
Contract	66	80	85	85
<b>Total</b>	164	180	190	200

## 2.3 Internal and external conditions for development EP

The teaching staff of the department is regularly engaged in the release of educational and methodological literature in the state language on the OP "Forest resources and hunting". The educational portal of the university also presents educational materials of disciplines in electronic format in the Kazakh language.

Professional practices of students are carried out in accordance with the approved end-to-end program of practices and generally meet the qualification requirements for training specialists in this field.

Issues of vocational training, professional practice and employment of graduates are resolved at the department with the obligatory participation of employers. Every year, round tables are held at the department, in which heads and representatives of city and district akimats, agricultural enterprises take part. The department organizes meetings with graduates-employers, seminars with practitioners.

The educational department "Agriculture and bioresources" cooperates with the Agrarian University of Plovdiv, (Bulgaria), Russian State University named after Timiryazev, Voronezh State Agrarian University, Bashkir State Agrarian University, Novosibirsk State Agrarian University, Omsk State Agrarian University.

According to the EP, the educational department "Agriculture and Bioresources" introduced elements of dual education. The contracts were concluded with the Semey structural subdivision of the Republican State Enterprise "Republican Forest Selection and Seed Center" of the Committee for Forestry and Wildlife of the Ministry of Ecology, Geology of Natural Resources of the Republic of Kazakhstan. The department has developed Regulations on the creation of a branch of the department, which is updated annually.

Sociological surveys are conducted annually, for example, graduates of the Shakarim University of Semey, "On working conditions and the quality of management of the educational process in the NAO Shakarim University of Semey", "Population, employers of Semey on the quality of education and the demand for specialists, including .h. NAO Shakarim University of Semey city", "Teaching staff on readiness and problems in updating the EP". During the monitoring, the results were obtained in

the form of the opinion of the inhabitants of the region about the competencies of graduates of the NJSC Shakarim University of Semey, including the educational programs of the educational department "Agriculture and Bioresources". The results of the study will be aimed at further improving the system of competencies of the above educational programs.

The university, faculty, EP takes part in the "Traveling student" project, with the aim of the comprehensive development of the student, adaptation to the characteristics of the regions of the Republic of Kazakhstan, increasing academic knowledge and employment opportunities. Within the framework of this project, the student gets the opportunity to study for 1 semester at different universities. In the 2022-2023 academic year, Aubakirova A., a 2nd year student of the EP "Forest Resources and Game Science", left for the Recep Tayyip Erdogan University (Turkey) on external outgoing academic mobility. According to the program of internal academic mobility of students in EP 6B08303 - "Forest Resources and Game Science", a student of the LRO-101 group Nugumanova A. studies for one semester from 01/23/2023 to 05/24/2023 at NJSC Toraigyrov University.

In 2023, Nurzhanova K.Kh., head of the Department of Agriculture and Bioresources, completed advanced training courses "Innovative educational programs: development and implementation experience" and "ISO 37001 management systems", and Dzhamanova G.I., manager of OP 6B08303 "Forest resources and Game Management" - "Evaluation of learning outcomes in educational programs and achievement of competencies."

Some types of classes in certain disciplines of the EP "6B08303 - Forest Resources and Game Management" are conducted with elements of dual training directly on the basis of production, on the basis of agreements concluded with organizations: the head of the SSP RSE "Republican Forest Breeding and Seed Center" E. Borisenko, RSE SFNR «Semey Ormany».

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

<b>№</b>	<b>Indicators</b>	<b>Unit.</b>	<b>2024-2025 academic year</b>	<b>2025-2026 academic year</b>	<b>2026-2027 academic year</b>	<b>2027-2028 academic year</b>
1	The proportion of teaching staff with a degree in EP.	%	65	65,5	68,5	71

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

EP 6B08303 "Forest resources and hunting science" in the ranking of educational programs of universities in 2023 took 3rd place. An important indicator of the relevance and relevance of educational programs, their compliance with modern trends in education is the academic mobility of students and teaching staff. In the direction of the development of academic mobility, students go to Turkey, Pavlodar.

### 3 Three Main objectives of the EP development plan

- Improving and improving the conditions for obtaining a full-fledged, high-quality professional education.
- Updating the content of educational programs that form the basic professional competencies of future forestry specialists.
- Creation of prerequisites for independent search and research activities of the student in the framework of the experiment at all stages of his education.
- Development of measures for the development of work with scientific and technical information using domestic and foreign experience in professional activities.
- Consultations of employers and scientists of scientific research institutes when choosing topical and practically significant topics for graduation theses.

### 4 Risk analysis of the OP

№	Name of risks	Measures to eliminate
1	Reducing the contingent of students in the EP.	Carrying out active career guidance work on the attractiveness of OP 6B08303- "Forest Resources and Game Science" in order to attract a new contingent of students on a paid-contractual basis. Providing consulting assistance to applicants from rural schools in preparing for the UNT, choosing a specialty, organizing Olympiads in the disciplines of the UNT in rural schools, holding an "Open Day" at the faculty. Negotiate with akims of the regions on the allocation of targeted grants for training in the EP.
2	Insufficient level of language knowledge for the introduction of trilingual education	Improving the language training of teaching staff through training in language courses.
3	Decrease in the level of employment.	Constant monitoring of the employment of graduates and close cooperation with employers.



4	Insufficient development of external and internal academic mobility of students and teaching staff	Conclude agreements with foreign and Kazakh universities for the development of external and internal academic mobility of students and teachers by building their individual learning path and choosing educational programs from various universities around the world, including internships for students and teachers in leading foreign universities.
5	The risk of reducing the degree of teaching staff for EP.	To carry out a qualitative renewal of the staff of the teaching staff on the basis of continuity by attracting talented young people to teaching and scientific activities, as well as training their own personnel through PhD doctoral studies.
6	Increasing the scientific potential of teaching staff.	Participate in competitions for grants funded by the Ministry of Agriculture, the Ministry of Education and Science of the Republic of Kazakhstan, as well as economic contractual activities in order to increase the scientific potential of the teaching staff.

### 5. Action plan for the development of the EP

№	Criteria	Expected results	U nit rev	2024 -	2025 -	2026 -	2027 -	2028 -
				2025	2026	2027	2028	
<b>Direction 1. Educational and methodological support</b>								
1.1	Educational update programs based on professional standards, taking into account the recommendations of employers	Conducting an examination of the educational program "6B08303 - Forest Resources and Game Science" in order to increase practice orientation and development professional competencies of graduates	Fact...	+	+	+	+	


<b>1.2</b>	Monitoring and updating catalogs of elective disciplines in accordance with the development of key and professional competencies, labor market demands	Improving the quality of the content of educational programs by including elective courses aimed at developing key and professional competencies In graduates in accordance with the demands of the labor market.	Fact...	+	+	+	+
<b>1.3</b>	Introduction to the educational process of modern learning technologies that contribute to the development of cognitive activity, and the communicative ability of students.	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.	Fact...	+	+	+	+
<b>1.3.1</b>	Implementation of Massive Open Online Courses (MOOCs) in the educational process of the educational program "6B08303 - Forest resources and hunting"	Introduction to the educational process of disciplines. 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.	units. %	70	80	85	90
<b>1.4</b>	Involvement of social partners and employers in the development, examination of the implementation of educational programs образовательных программ	Improving the quality of ongoing educational programs, taking into account market demands and employers' recommendations	units.	2	3	3	4
<b>1.5</b>	Development and implementation of elective courses in English	Introduction to the educational process of disciplines in English	units.	1	1	2	3
<b>1.6</b>	Conducting seminars and round tables on the use of innovative technologies in the educational process.	Implementation of innovative technologies in the educational process	%	95	100	100	100

<b>1.7</b>	Publication of educational, educational-methodical and scientific literature on implemented EPs.	Improvement of educational and methodological support in the disciplines of ongoing educational programs	units.	5	7	7	9
<b>1.8</b>	Conclusion of agreements with foreign and domestic universities - partners in order to develop the academic exchange of students of all levels and teaching staff	Creation of a database of foreign and domestic universities - partners for the development of academic exchange of students of all levels and faculty	units.	1	1	2	3
<b>1.9</b>	Invitation of students from partner universities to study for a semester, short-term internships, practice, etc.	Development of international recognition of educational programs, implementation of academic mobility programs for students	person	1	2	2	2
<b>1.10</b>	Participation of teaching staff and students in international academic exchange programs	Development of international cooperation with foreign universities implementing educational programs in the direction 6B083 - Forestry	person	1	1	2	2
<b>1.11</b>	Development of outgoing academic mobility of teaching staff and students in the direction 6B083 - Forestry	Improving the educational program based on the use of experience in the implementation of similar programs in the leading universities of the Republic of Kazakhstan	person	2	2	3	3
<b>Direction 2. Teaching staff.</b>							
<b>2.1</b>	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 undergone advanced training at the republican level is at least 20%	person	1	2	3	3
<b>2.2</b>	Passage of advanced training, retraining, internships of teaching staff at the international level	Passage of at least 2 teachers of the advanced training program, retraining, internship of teaching staff at the international level	person	1	2	3	3


2.3	Promotion of publications of the teaching staff's works in international publications indexed by the Web of Science and Scopus databases	Increase in the share of teaching staff who 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	%	45	50	55	60
2.4	Involvement of specialists in the practical field of activity in teaching and scientific activities	Participation in the implementation of educational programs of practitioners (at least 20% of specialists)	%	50	55	60	70
<b>Direction 3. Internationalization of educational programs</b>							
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 for students	units.	2	2	3	3
3.2	Attracting foreign students to study under the educational program "6B08303 - Forest Resources and Game Science"	Increasing the number of foreign students	person	1	1	2	3
3.3	Organization of joint scientific and practical events with international partners	Increasing the efficiency of scientific and scientific-methodical activities of teaching staff, exchange of experience with foreign partners	units.	1	1	2	2
3.4	Invitation of foreign experts for lectures and consultations on master's projects and dissertations	Improving the content component of educational programs based on the introduction of the experience of foreign specialists in the implementation of educational programs	units.	-	-	-	-

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	person	1	1	2	2
<b>Direction 4. Logistics and digitalization</b>							
4.1	Stage-by-stage equipping of classrooms with technical teaching aids (projectors, panels, interactive and multimedia boards, multifunctional devices, webcam, projector screen, etc.)	Equipping classrooms assigned to the department with technical teaching aids (projectors, panels, interactive and multimedia boards, multifunctional devices, webcam, projector screen, etc.)	units.	10	15	20	25
4.2	Carrying out automation of the educational process (testing, session management, movement of the contingent of students, dean's office, department, teaching staff load, schedule, library, syllabuses)	Information management based on the automation of the educational process (testing, session management, student movement, dean's office, department, teaching staff load, schedule, library, syllabuses)	Fact...	+	+	+	+
4.3	Replenishment of the full-text database of scientific research results	An increase in the number of results of scientific works of scientists, research of teaching staff and students, teaching staff (articles, monographs, etc.)	units.	100	100	100	100
4.4	Teaching staff and students, teaching staff (articles, monographs, etc.) Expansion of the fund of scientific and educational literature, including on electronic media on ongoing educational programs	Ensuring the implementation of educational programs based on modern educational and information resources, including on electronic media	%	85	95	100	100


4.5	Monitoring the filling and improvement of the faculty website	Formation of the website of the faculty on various aspects of the implementation of educational programs.	%	85	90	95	100
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Head of the Department  B. Ahmetova

**CONSIDERED**

At the meeting of the Commission on Academic Quality of the Research School of Veterinary Medicine and Agriculture  
 Chairman of the Commission  G. Jamanova  
 No. 6 "06" 06 2024

**AGREED BY**

Dean of the RSchVMA  N. Yesengulova  
 "06" 06 2024