

   MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN

SOUTH KAZAHSTAN STATE UNIVERSITY

named after M. Auezov

“Approved” by

Rector \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Doctor of history science,

Academician

Kozhamzharova D.P .

"\_\_\_" \_\_\_\_\_\_\_\_\_ 20 \_\_\_ y.

**EDUCATIONAL PROGRAM**

6B08150 - Protection and Quarantine of Foresty" "

|  |  |
| --- | --- |
| Registration number | - |
| Code and classification of the field of education | 6B08 - Protection and quarantine of forestry |
| Group of educational programs | 6V08-Agriculture and Bioresources |
| Type of EP | acting |
| ISQE level | 6 |
| NQF level | 6 |
| IQF level  | 6 |
| Language of instruction | Kazakh, Russian, English |
| Typical Duration | 4 years |
| Form of training | Full-time , DE |
| The complexity of EP | 241 credits |
| Distinctive features of EP | Dual training |
| University partner (JEP) | - |
| University partner (DDEP) | - |
| Social partner ( DE ) | ESPC “Kainar Bulak” , “ Zhas Keshu ” |

Shymkent, 2020y

Developers:

|  |  |  |
| --- | --- | --- |
| Full name | Position | Signature |
| Adyrbekova T .M. | Candidate of chemical science, professor, head of the center for management of educational programs and licensing |   |
| Elibaeva G.I. | Candidate of biological science, Associate Professor, Head of Department of “Vegetable growing and animal husbandry” |   |
| Raisov B.O. | Doctor of agricultural science, Professor of department of "Vegetable growing and animal husbandry" |   |
| Murzabaev B.A. | Candidate of agricultural science, senior teacher of department of "Vegetable growing and animal husbandry" |   |
| Kulzhanov Sh.N. | Teacher of department of " Vegetable growing and animal husbandry " |   |
| Turta Diana | student of the group AP-17-1dk4 |   |
| Karataev S. | Director of the «GKKP "Shymkent State Arboretum named after A. Askarov"» |    |

The study program was considered by the committee on innovative teaching technologies and methodological support of the Agrarian faculty, protocol No. 7 of February 26, 2020.

Chairman of the Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Abdullaeva G.A.

Considered and recommended for approval at a meeting of the Training Council of SKSU them. M. Auezova

Minutes No. \_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2020

Approved by the decision of the Academic Council of the University

Protocol No. \_\_\_\_\_ of "\_\_\_\_" \_\_\_\_\_\_\_\_\_\_ 2020

CONTENT

|  |  |  |
| --- | --- | --- |
|  | Introduction | 5 |
| 1 | Education passport | 7 |
| 2 | Learning outcomes of EP | 8 |
| 3 | Competencies of the graduate of EP  | 9 |
| 4 | A summary table reflecting the volume of disbursed credits by modules of the educational program | 12 |
| 5 | Information about disciplines | 13 |
|  | Approval Sheet | 35 |
|  | Appendix 1. Review from the employer | 36 |
|  | Appendix 2. Expert opinion | 37 |

**Introduction**

1. **Application area**

It is intended for the preparation of bachelors in the educational program (here in after - EP) *6B08310 - “Protection and Quarantine of Forestry”*in the RSE on BEM “South Kazakhstan State University named after M. Auezov» MES RK.

1. **Regulatory documents.**

The Law of the Republic of Kazakhstan “On Education” (with [amendments and additions](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=http://online.zakon.kz/Document/%3Flink_id%3D1000664096) as of July 4, 2018);

Standard rules for the activities of educational organizations implementing educational programs of higher and (or) postgraduate education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan dated October 30, 2018 No. 595 (registered with the Ministry of Justice of the Republic of Kazakhstan October 31, 2018 No. 17657);

State generally binding standards of higher and postgraduate education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 No. 604;

Rules for the organization of the educational process on credit technology of education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan dated April 20, 2011 No. 152 with amendments and additions dated October 12, 2018 No. 563;

Professional standard “Growing vegetables and potatoes” Order of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan “Atameken” No. 339 dated 12/12/2018.

Professional standard “Horticultural activity” Order of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan “Atameken” No. 339 dated 12/12/2018.

Professional standard “Growing sugar beet and its seeds” Order of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan “Atameken” No. 263 dated 12/26/2019.

Professional standard “Production of greenhouse vegetables and berries” Order of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan “Atameken” No. 263 dated 12/26/2019.

Professional standard “Viticulture” Order of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan “Atameken” No. 263 dated 12/26/2019.

1. **Educational program concept**

The purpose of the educational program is consistent with the mission of the university and is aimed at preparing the country's intellectual elite, with advanced knowledge of entrepreneurial skills, fluent in three languages, demonstrating the skills of conceptual, analytical and logical thinking, a creative approach to professional activities, able to work in a national and international team, learn lifelong learning strategy.

The educational program is harmonized with the 6th level of the National Qualifications Framework of the Republic of Kazakhstan, with Dublin descriptors, 1 cycle of the Qualification Framework of the European Higher Education Space. (A Framework for Qualification of the European Higher Education Area), so also with 6 levels European Qualification Framework for education in the course of the whole life (The European Qualification Framework for Lifelong Learning).

The educational program is focused on professional and social order through the formation of professional competencies related to the necessary types of research, practical and

The uniqueness of this EP is, that carried out the practice-oriented training. EP provides students an expansive education in agricultural sciences with the transition on the dual training system. To implement the EP, the Department of Vegetable growing and animal husbandry is provided with an excellent material and technical base. There are two modern greenhouses at the department, which allows conducting year-round various experiments to protect vegetables from diseases and pests, and in practice, not breaking away from classrooms, to consolidate the material covered. The department also has at its disposal "Zhaskeshu" at the piedmont area in Tulkubas district with the area of 40 hectares and irrigated areas “Kaynar Bulak ” with an area of 2.8 ha for growing fruit trees, a vineyard, vegetable crops in the open ground, grain crops, as well as forage crops. On the field, students carry out all agricultural activities, activities to combat pests and diseases.

The EP “Protection and Quarantine of Forestry” is a modern program that develops scientific and practical skills among students, which helps them understand the wider agricultural systems. At the department there is a good teaching and teaching potential. Teachers of the department have experience in research institutes, employees of leading agro-business. Close long-term cooperation with leading agricultural enterprises, such as the “Sairam-Ugam” State National Nature Park, the “Aksu-Zhabagy” State Nature Reserve, the Forestry and Hunting Committee of the Ministry of Agriculture of the Republic of Kazakhstan, the “Zhasyl Aymak” SU Department of Natural Resources and Environmental Management of Turkestan Region, "Shymkent State arboretum", LLP "Dala Fruit", LLP "Ken tau", LLP "Kok Tal", LLP " Kazagronom", LLP "Adel" all brought warriors fruit in the field of education and employment.

Students who have mastered the EP “Protection and Quarantine of Forestry” can work using theoretical and practical knowledge gained in the field of forest resources accounting and forest protection, intermediate and recreational forest management. The department has the opportunity to develop cooperation on international relations. So, well-known foreign scientists with fairly high rating indicators are periodically invited to give lectures and conduct research.

A wide range of jobs is presented to graduates who have mastered the EP “Protection and Quarantine of Forestry”: responsible positions are available to them , such as the head of the forestry department (head of the nursery, the head of the site (in forestry)), a forestry engineer, (engineer of forest crops, engineer reforestation, forestry engineer, engineer of forest resources, the engineer of the Environment) forest pathologist engineer (engineer on preservation and protection of the forest), and others, producing the forest products.

Bachelors in the specialty “ Protection and Quarantine of Forestry” can - independently create and develop and implement projects of forest nurseries, forest inventory; tax the forest, and make their acceptance; organize and carry out work to protect forests from fires, injuries, unauthorized logging, as well as organize agricultural activities to combat forest pests and diseases; compile current and annual reports of state forestry institutions, national natural parks and other specialized enterprises and other areas of forestry production.

Graduates of the specialty “ Protection and Quarantine of Forestry ” can work as an engineer of forest crops, forest ranger, assistant forester, engineer for forest conservation and protection, master of a forest nursery, master landscaper at the following enterprises: “Sairam-Ugam” State National Nature Park, the “Aksu-Zhabagy” State Nature Reserve, the Forestry and Hunting Committee of the Ministry of Agriculture of the Republic of Kazakhstan, the “Zhasyl Aymak” SU Department of Natural Resources and Environmental Management of Turkestan Region, "Shymkent State arboretum", LLP "Dala Fruit", LLP "Ken tau", LLP "Kok Tal", LLP " Kazagronom".

This educational program is developed taking into account the achievements of modern domestic and world experience in this field, copyright and collective works and educational and methodological developments in the field of specialization, requirements of employers and labor market demands.

The educational program is aimed at achieving learning outcomes through the organization of the educational process using the principles of the Bologna process, student - centered learning, accessibility and inclusiveness.

The learning outcomes of the program are achieved through the following training activities:

- classroom training: lectures, seminars, practical and laboratory classes - conducted with the use of innovative teaching technologies, the use of the latest achievements of science, technology and information systems;

- extracurricular activities: independent work of the student, including under the guidance of a teacher, individual consultations;

- conducting professional practices, carrying out term papers and dissertations (projects).

When implementing educational programs at the department, special attention was paid to attracting students to the research work of the department: participation in the work of the “Ormanshy” scientific clubs, in republican subject Olympiads and student research competitions; in Republican and International scientific conferences of young scientists and students.

The university has taken measures to maintain academic honesty and academic freedom, to protect against any kind of intolerance and discrimination against students.

The quality of the EP is ensured by the involvement of stakeholders in its development and evaluation, systematic monitoring and review of its content.

**4. Requirements to incomes**

The Ministry of Education and Science of the Republic of Kazakhstan, Order No. 600 of 10/31/2018, is established in accordance with the Model Rules for admission to training in educational institutions that implement educational programs of higher and postgraduate education

**1. PASSPORT OF THE EDUCATIONAL PROGRAM**

**1.1 The purpose and objectives of the educational program in the specialty**

Forestry protection and quarantine was created on the basis of a request from employers in connection with the increased need for specialists who are able to develop and implement forest reclamation projects, control forest management and forestry operations for forest maintenance, reforestation and protective afforestation.

EP - Protection and quarantine of forestry will provide in-depth theoretical knowledge and practical skills in accounting and protection of forest resources , forest management, creating forest crops and growing planting material, planting greenery in populated areas, developing forest nursery projects, ways to create forest crops, protective and greening afforestation, land improvement technologies.

The ultimate goal of the program involves a clear orientation to the future, which is manifested in the possibility of posturing your education, taking into account success in personal and professional activities that meet the requirements of employers.

The main objectives of the EP - Protection and quarantine of forestry are:

-Provide an individual learning path in accordance with the chosen specialization;

- to provide a full and high-quality education, to form professional competence, to deepen theoretical and practical, as well as individual training of bachelors in the field of forestry.

- facilitate the acquisition by bachelors of the most important and sustainable knowledge that ensures a holistic perception of the world;

-to promote the acquisition of skills of participation in scientific events at various levels, the continuation of scientific training;

- to provide the necessary amount of knowledge in the field of forest resources and forestry.

**1.2 List of qualifications and positions**

A graduate in this academic degree is awarded the degree of “Bachelor of Agriculture” under the educational program 6В08150 - “Protection and Quarantine of Forestry” .

Bachelors in EP 6V08150 - “Protection and Quarantine of Forestry” can hold the following positions : and forestry engineer, forester, assistant forester, forest conservation and protection engineer, master of forest nursery, master landscaper without presenting requirements for work experience in accordance with with qualification requirements in accordance with the Qualification Directory of positions of managers, specialists and other employees, approved by order of the Minister of Labor and Social Protection of the Republic of Kazakhstan dated May 21, 2012 No. 201-o-m.

**1.3 Qualification characteristics of the graduate of the educational program**

**1.3.1 Scope of professional activity**

The scope of professional activity is the forestry complex :

- organization of work on account of forest resources and forest protection, protection the afforestation ;

- the main thing, intermediate and recreational forest management;

- the creation of forest crops and the cultivation of planting material, landscaping of populated areas.

**1.3.2 Objects of professional activity:**

• Committee for Forestry and Wildlife of the Ministry of Agriculture of the Republic of Kazakhstan;

• municipal public forestry institutions,

• Regional management of natural resources and environmental management;

• specially protected natural territories (state nature reserves, state national nature parks and reserves, botanical gardens, state nature monuments, etc.);

• forest nurseries, forest seed and breeding stations;

• city gardens, parks of culture and rest;

• joint-stock companies, production cooperatives, limited liability partnerships, individual entrepreneurs engaged in the improvement and gardening of populated areas;

- Landscaping and floristry studios

**1.3.3 Items of professional activity**

The subjects of professional activity of a bachelor in the specialty 6В08150– Protection and Quarantine of Forestry ” are:

- organization of work on forest resources accounting and forest protection;

-forest use;

-creating forest crops and growing planting material;

-greening and improvement of populated areas.

**1.3.4 Types of professional activity**

Bachelors of specialty 6В08150 - “Protection and Quarantine of Forestry” can perform the following types of professional activity: production and technological; organizational and management; design; research. Ensuring the preservation of forests from fires, unauthorized logging, pests and diseases, rational use of forest resources, forest management measures for forest care, reforestation and protective afforestation.

**2. Educational Results for EP**

**ER 1** Free communicate in a professional environment and society on Kazakh, Russian and English languages.

**ER 2** Demonstrate natural science, mathematics, social, socio-economic and engineering knowledge in professional activities, methods of mathematical data processing, theoretical and experimental research, regulatory documents and elements of economic analysis.

**ER 3** Possess information and computational literacy, be able to independently determine the goals of the study and choose the ways to achieve it; the ability to generalize, analyze and perceive information, generalize the statistical processing of experimental results, formulate conclusions;

**ER 4** Methods and technologies for growing planting material, ways of creating forest crops

**ER5** Organization and implementation of work to protect green spaces from fires, mines, unauthorized logging, to combat pests and forest diseases

**ER 6** Adapt soil cultivation systems for forest crops, taking into account the fertility, steepness and exposure of the slopes of the relief, the level of groundwater, fertilizers used.

**ER 7** Morphology, biology of woody and shrubby plants, patterns of development of forest biogeocenoses

**ER 8** Reporting by state forestry institutions, national natural parks and other specialized enterprises

**ER 9** Learning the most effective high-tech research methods; study in detail the state of soil under forest crops.

**ER 10** Distinguish the needs forest cultures in batteries depending on the species and type of trees with assuring their biology and regional natures resources and forestry systems .

**ER 11** Use research, entrepreneurial and work skills in the face of uncertainty.

**ER 12** It is effective to work individually and as a member of a team, correctly defend your point of view, adjust your actions and use various methods, maintaining a healthy lifestyle.

**3 OP GRADUATE COMPETENCE**

3.1 Successful completion of training in EP contributing of forming graduates the following competencies:

-key competencies (KC) ;

- professional competencies (PC).

**Key competencies:**

in the field of native and foreign (English) language in ( KC 1 )

- the ability to express and understand concepts, thoughts, feelings, facts in written and oral forms (listening, speaking, reading and writing), creatively in all the variety of social and cultural contexts: during study, at work, at home and at leisure ; skills in mediation and intercultural understanding;

fundamental mathematical, natural science and technical training and ( KC 2 )

- the ability and willingness to apply the educational potential, experience and personal qualities acquired during the study of mathematical, natural science, technical disciplines at the university, to determine ways to control and evaluate the solution of professional problems, the development of mathematical and natural thinking;

to computer (KC 3 )

- the ability to confidently and critically use modern information and digital technologies for work, leisure and communication, mastery of the skills of use, recovery, evaluation, storage, production, presentation and exchange of information by computer, communication and participation in collaborating networks via the Internet in the field of professional activity ;

with social (KC 4 )

- the ability to own social and ethical values based on public opinion, traditions, customs, norms and to be guided by them in their professional activities ; to know the cultures of the peoples of Kazakhstan and to observe their traditions; to observe the foundations of the legal system and legislation of Kazakhstan, to know the trends in the social development of society; be able to adequately navigate in various social situations; be able to find compromises, correlate your opinion with the opinion of the team; own business ethics, ethics and rights new standards of behavior; strive for professional and personal growth ; work in a team, correctly defend their point of view, propose new solutions; demonstrate tolerance towards other individuals;

economic, managerial and entrepreneurial (KC 5 )

- the ability to know and understand the goals and methods of state regulation of the economy, the role of the public sector in the economy; own the basics of economic knowledge; possess the skills of critical thinking, interpretation, creativity of analysis, drawing conclusions, evaluation; manage projects to achieve professional goals, manage staff, demonstrate entrepreneurial skills ;

cultural training (KC 6 )

- the ability to know and understand the traditions and culture of the peoples of Kazakhstan, is tolerant to the traditions and culture of other peoples of the world, is aware of the attitude of tolerant behavior; not subject to prejudice, has high spiritual qualities, is formed as an intelligent person .

**Professional competencies:**

PC-1-own knowledge of the main types of forest crops, their biological and economic characteristics, environmental requirements, phytosanitary monitoring of pests and diseases using modern digital methods and the preparation of an effective plan of protective measures; select a set of forest species, taking into account the agro-land conditions of the growing region;

PC-2 - own methods for calculating doses of organic and mineral fertilizers, determine the method and technology of their application under forest crops;

PC-3 - justify and apply the integrated system of protection against weeds in the plantation of nurseries and plantations of forest crops;

PC-4 to have knowledge of selection of species of forest plants for specific conditions of the region and the level of intensification of forest management , to prepare technology of seed production in time and standing forest seed plots, seed orchards in areas \ the State Forest Fund ;

PC-5 – produce development of agro-technical measures to improve the fertility of the soil; to have assessment techniques of soil fertility and reproduction in forestry .

**3.2 Matrix of correlation of learning outcomes of EP in general education with formed competences of modules**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | **P 1** | **P 2** | **P3** | **P 4** | **P5** | **P 6** | **P 7** | **P8** | **P 9** | **P10** | **P11** | **P12** |
| QC 1 | **+** |  |   | **+** |   |   |   |   |   |   |   |   |
| QC 2 |  | **+** |   |   |   |   |   |   |   | **+** |   |   |
| KK3 | **+** |   | **+** |   |   |   |   |   |   |   |   |   |
| QC 4 | + |   |   |   |   |   |   |   |   |   |   | **+** |
| KK5 |   |   |   | **+** |  |   |   |   |   | **+** | **+** |   |
| QC 6 |   |   | + |   |   |   | + |   |   |   |   | **+** |
| PC 1 |   |   |   | + |   | + |   |   | + |   |   |   |
| Pc 2 |   |   | **+** |   |   |   |   |   |   | + |   |   |
| PC3 |   |   |   | **+** |   |   |   |   |  | **+** |   |   |
| Pc 4 |   |   |   |   |   |   |   | **+** |   | **+** |  |   |
| PC5 |   |   |   |   | + |   |   | **+** |   |   | **+** |   |

**4. CONSOLIDATED TABLE REFLECTING THE VOLUME OF DEVELOPED LOANS IN THE CONTEXT OF MODULES OF THE EDUCATIONAL PROGRAM**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Course of Study | Semester | The number of mastered modules  | Number of studied disciplines | Amount of credits | Total hours | Amount |
| OC | HSK | EC | Theoretical education | Physicaltraining  | Training practice | Internship Undergraduate practice | final examination | KZ |   | exam | Dif. offset |  |
| 1 | 1 | 3 | 4 | 1 | 3 | 29 | 2 |  |  |  | 31 | 930 | 6 | 2 |  |
| 2 | 5 | 5 | 2 | 1 | 27 | 2 | 1 |  |  | 30 | 900 | 6 | 2 |  |
| 2 | 3 | 5 | 2 | 5 | 1 | 28 | 2 |  |  |  | 30 | 900 | 6 | 2 |  |
| 4 | 5 | 2 | 3 | 3 | 25 | 2 |  | 3 |  | 30 | 900 | 6 | 2 |  |
| 3 | 5 | 5 | - | 3 | 3 | 30 |  |  |  |  | 30 | 900 | 6 | - |  |
| 6 | 4 | - | 1 | 4 | 24 |  |  | 6 |  | 30 | 900 | 4 | 1 |  |
| 4 | 7 | 3 | - | 1 | 3 | 15 |  |  | 5 |  | 20 | 600 | 3 | 1 |  |
| 8 | 3 | - | - | 4 | 20 |  |  |  |  | 20 | 600 | 4 | - |  |
| 9 | 1 | - | 1 | 1 | - |  |  | 8 | 12 | 20 | 600 | - | 2 |  |
| **Total** |  |  | **13** | **17** | **23** | **198** | **8** | **1** | **22** | **12** | **241** | **7230** | **41** | **12** |  |

**5. Information about disciplines**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Module name** | **Cycle** | **HSC / EC** | **Component Name** | **Discipline Summary****(30-50 words)** | **Number of credit** | **Formed ER****(codes)** |
| Module of the social science | GED | OC | Contemporary History of Kazakhsta | It allows you to classify the conceptual foundations of Russian history, to interpret the origins, continuity of Kazakh statehood and current problems of the history of modern Kazakhstan. Exposure analysis and the national intelligentsia in shaping the ideology of the liberation movement, and e tap s socio-economic modernization of Kazakhstan. Characterize the creation of a    democratic state of law. Assessing the contribution of the First President to the theory and practice of public administration. | 5 | ER 1ER2 |
| GED | OC | Philosophy | The foundations of the emergence of philosophy are examined , the features of the emergence of a culture of thinking are revealed, the concepts of “philosophy”, “worldview”, the essence and content of the concepts of “being”, “consciousness” are revealed. It sees the size value for the concepts of " knowledge " and "creativity" , reveals the essence and content of the category of philosophy of freedom, developing the skills of highlight the essence of philosophical problems, critical thinking, research skills philosophical aspects, problems of practice and knowledge . | 5 | ER 1ER2 |
| Module of socio-political knowledge  | GED | OC | Social and Political Studies  | Theories of sociology are studied, the social structure and stratification of society, the role and place of politics in society is explained, the main stages of the formation and development of political science, including youth politics, the role of politics in the system of public life are examined, the essence of r statehood is revealed, the relationship Statehood and civil society. Skills are developed from sociological research, analysis of socio-political information. | 4 | ER 1ER2ER 12 |
| GED | HSC / EC | Ecology and Fundamentals of Life Safety  | Study the relationship of organisms, including humans, with the environment, determining the extent, permissible limits of the impact of human society on the environment, the possibilities of reducing these effects or their complete neutralization. Skills are being developed strategically - this is the science of the survival of mankind, a way out of the ecological crisis, which is gaining global proportions - throughout the entire planet of the Earth. | 3 | ER 1ER2 |
| GED | HSC / EC | Fundamentals of entrepreneurship skills and anti-corruption culture | Generates knowledge about the organization of the company, doing business. Develops the skills of business planning of production and sale of products, market analysis; calculation of profit, income, profitability, solvency, liquidity of the company.Considers the essence, the factors of corruption. Forms an anti-corruption worldview, culture. It develops a civic stand for corruption, realizes the values ​​of moral awareness of anti-corruption. It instills the skills of critical analysis of corruption phenomena. | 3 | ER 1ER2 |
| GED | HSC / EC | Fundamentals of Economics and Law  | Considers the role of the state in market development, competition, demand, and supply. It instills the skills of calculating costs, income, indicators of the circuit and capital turnover. Allows you to critically examine the markets of factors of production, factor income. Forms knowledge of the law. It instills the skills of analyzing the legitimacy of events, the ability to apply to regulatory acts. Raises the level of legal consciousness, legal culture. |  | ER12ER2 |
| GED | OC | Cultural Studies and Psychology  | Understanding of the social and ethical values of society as a product of the integration processes in the basic disciplines of knowledge systems, socio- cultural and psychological module; analyze the characteristics of psychological institutions in the context of their role in the modernization of Kazakhstani society; to formulate programs for resolving conflict situations in society, including in professional society; to be able to correctly express and defend their own opinion having social significance. | 4 | ER 1ER12 |
| Module of communicative mobility   | GED | OC | Kazakh (Russian) language | The development of cognitive and communicative activity in Russian (Kazakh) language in the areas of interpersonal, social, intercultural communication. The development of skills for discussing ethical, cultural, socially significant norms in discussions, the ability to work in a team, teamwork, creativity. The development of practical skills for interpreting information text, explanations of their stylistic, genre specifics in various areas of communication. | 10 | ER 1ER2 |
| GED | OC | Foreign language | The development of cognitive and communicative activities in English in the areas of interpersonal, social, intercultural communication. The development of skills to discuss ethical, cultural, socially significant norms in discussions, the ability to work in a team, teamwork, flexibility, creativity. The development of practical skills of interpreting text information , explanations of their stylistic, genre specifics in various areas of communication. | 10 | ER 1ER2ER 12 |
| GED | OC | Physical training/  | Examines the levels of development of essential motor skills and physical ka honors and creates the preconditions for multilateral manifestations of creative activity. Physical [culture](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=http://wikiwhat.ru/%25D0%259A%25D1%2583%25D0%25BB%25D1%258C%25D1%2582%25D1%2583%25D1%2580%25D0%25B0) promotes education that universal [values](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=http://wikiwhat.ru/%25D0%25A6%25D0%25B5%25D0%25BD%25D0%25BD%25D0%25BE%25D1%2581%25D1%2582%25D1%258C) as [health](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=http://wikiwhat.ru/%25D0%2597%25D0%25B4%25D0%25BE%25D1%2580%25D0%25BE%25D0%25B2%25D1%258C%25D0%25B5), physical and mental well-being.    | 8 | ER2 |
| PD | HSC | Professional Kazakh (Russian) language | The development of skills extract from the text of the required information, its Institute interpreting in teaching and professional communication. Development the ability to establish contacts at the professional level, competently to build communication, based on the goals and the communicative situation. The inculcation of creativity, innovation, collegiality in the process of building a program of speech behavior in the Kazakh (Russian) language in the field of professional communication. | 3 | ER 1ER2 |
| PD | HSC | Professionally-oriented foreign language  | Skills development extract from the text of the required information, its Institute interpreting in educational and professional communication. Development of the ability to establish contacts at a professional level, competently build communications based on the goals and situations of communication.The inculcation of creativity, innovation, collegiality in the process of building a program of speech behavior in a foreign language in the field of professional communication. | 3 | ER 1ER2ER11 |
| PD | EC | Kazakh alphabet based on latin graphics | The formation of Kazakh sounds taking into account the features of their pronunciation, the study of the phonetic features of Kazakh words and phrases based on Latin graphics. Development of literacy skills based on the Latin alphabet. The ability to read texts in the Kazakh language using Latin graphics. | 3 | ER 1ER2 |
| PD | EC | Academic writing | Learns linguistic competence, the possession of which allows the researcher to read, understand and write scientific texts. The section contains recommendations for the preparation, writing and publication of scientific texts, reports and publications. |  | ER 1ER3 |
| PD | EC | Mukhtarology | Exploring the camping life and work M.O.Auezov; analyzes the creative laboratory of the writer, his biography in the context of creativity; as the creator of the science of Abaevology; Researchers zhira “Manas”. Acquaintance with M. Auezov as a prominent public figure. The skills of analyzing the literary heritage of M. Auezov in world and eastern literature are developing. They instill feelings of patriotism and love for the motherland. |  | ER 1ER2 |
| PD | EC |  Abay studies  | It is studying a section of world and Kazakh literary criticism that studies the life and work of Abay Kunanbaev, his philosophical, aesthetic and social views. |  | ER 1ER2 |
| PD | EC | Actual Problems and Modernization of National Awareness | To know that given the importance of the modernization program, the implementation of projects began immediately. By decree of the President of the Republic of Kazakhstan N.A. Nazarbayev created the National Commission for the implementation of the program of modernization of public consciousness, which launched a multifaceted work on all six projects. |  | ER 3ER11 |
| GED | OC | Information and Communication Technologies (in English)  | Knowledge of computer systems, software. Development of skills in the use and use of information resources for searching and storing information, working with spreadsheets, working with databases. Application of methods and means of information protection; design and creation of websites, multimedia presentations. Skills of using e-government and electronic textbooks, various cloud-based mobile technologies, SMART technology management. | 5 | ER 3ER2 |
| Flora and fauna | PD | HSC | Agrometeorology | It examines the most important agro-meteorological factors that determine the living conditions and production of plants. Development of skills in atmospheric structure, movement of air masses, radiation and heat balance, meteorological elements about climates and forecasts of their change; methods and technical means of measuring meteorological data. | 4 | ER 5ER10 |
| PD | EC | Dendrology | Studying with forming a clear knowledge system of trees and shrubs in student’s vegetation features of the anatomical and morphological structure of wood and shrub life forms, give an idea of ​​their systematic features and the role of trees and shrubs in nature and human life. | 5 | ER 4ER 7ER10 |
| PD | EC | Dendrology with the basics of geobotany | The general characteristics of dendrology and geo-botany, the study of plant communities are considered. Studying the dynamics of plant communities. Classification of plant communities. Geo-botanical zoning and mapping. Indication geo-botany or phyto-indication - an indication of environmental factors based on vegetation. Private geo-botany. Vegetation of woody and shrubby species of arid Territories of Kazakhstan and introduced plants. |  | ER 3ER8ER10 |
| PD | HSC | Standardization, Certification and Metrology              | To know and understand the systems of technical regulation, standardization, ensuring the uniformity of measurements, legislative and regulatory documents, types and categories of standards. Apply standardization methods, certification schemes, requirements of technical regulations of the TS / Euro ES. Analyze compliance with standardization, certification, metrological norms and rules by market entities. To evaluate the economic efficiency of work on interstate and international standardization, certification, metrology | 4 | ER 11ER2ER3 |
| PD | EC | Protection and rational use of fauna  of  Kazakhstan | To know and understand the protection of wildlife and forest resources. Birds and mammals subject to protection and limited use. The influence of adverse environmental conditions. The influence of human economic activity. Protection of fauna and flora; forestry of Kazakhstan. Hunting and nature conservation. Accounting for the number of hunting animals. | 5 | ER5ER7 |
| PD | EC | Biology of forest animals and birds | Studying the general characteristics of the class of birds. Geographical distribution of the number of birds. The main features of the ecology of birds. Birds and forest. Bird distribution in various types of forest. Birds and pests of the forest. Birds eating seeds and fruits. Birds distributing seeds of tree and shrub species and plants. Predator birds. The effect of birds on the state of the forest. General characteristics of the class of mammals. Ecological groups of mammals. |  | ER5ER7ER10 |
| PD | EC | Inorganic and analytical chemistry | It studies the basic laws, theories and principles of inorganic and analytical chemistry: classes of inorganic compounds, methods for processing an analytical signal; Elements of metrology, standardization and certification in the analysis. Methods of synthesis of inorganic substances and methods describe properties skills substances on the basis of patterns arising from the periodic law of the Periodic Table and system of chemical, physic-chemical methods of analysis. | 4 | ER6ER11ER9 |
| PD | EC | Organic  chemistry  | It studies the basic principles of modern theoretical organic chemistry; principles of classification of organic compounds; rules of systematic, rational and trivial nomenclature; the main methods for producing organic compounds of various classes, their physical and chemical properties, methods for the isolation, purification and identification of organic compounds; Skills for performing laboratory experiments on the synthesis and study of the physicochemical properties of organic compounds. |  | ER6ER11ER9 |
| Forestry and decorativeplantings | PD | HSC | Forest science | General information, tasks and objects, methods of studying the discipline of forest science. The relationship of forest science with other disciplines, sciences. Objects of study and their characteristics. Structural parts of the plant community, their characteristics. Typological characteristics of forest areas. Tax descriptions and tablets. Standards for the division of land covered by forest vegetation into separate forest taxation areas. Forestry tools and instruments. | 4 | ER6ER11ER8 |
| PD | HSC |  Educational practice  | Teaching practice on general subjects organized in Laboratories, training experimental farms, as well as in a state forest , nature reserves and arboretums enterprises for the purpose of acquiring skills: recognition of wild and forest crops , the main types of soil; diagnosing pests and deceases; agro-meteorological observations, land management, scientific experiments, analysis of agricultural and economic efficiency of production. | 1 | ER3ER4ER8 |
| PD | EC | Decorative dendrology | The formation of a complex of knowledge among students about the international botanical nomenclature, species diversity of woody plants, life forms, about the biological, environmental and decorative features of woody plants of a modern assortment for further practical application of the knowledge gained in the field of landscape design. | 3 | ER4ER5ER9 |
| PD | EC | Plant formation in forestry | It is studying the ability to successfully carry out the production of root-own and grafted large-sized planting material of decorative wood plants, planting and growing them at landscaping facilities, taking into account the durability and maximum manifestation of their inherentdecorative properties. |  | ER 4ER7ER10 |
| PD | EC | Fundamentals of Agrobusiness and Business | Considers the features of the content of entrepreneurship in the agricultural - industrial complex. Introduces the features of state regulation of entrepreneurial activity. Forms the skills of creating and registering your own business, developing constituent documents, agribusiness strategies, business plans. It reveals the mechanism for the formation of business ideas, risk management, assessment and analysis of the effectiveness of entrepreneurial activity in a specific area or industry. | 3 | ER 8ER11ER9 |
| PD | EC | The produce organization and business planing of soil protecting in AFC. | Knowledge and understanding of the laws, principles, forms of organization of production, forms of entrepreneurial activity, business plan, and leasing, commercial activity. Skills for calculating the effectiveness of the use of progressive forms of organization and material stimulation of labor; rationale for the combination of industries in agricultural enterprises; substantiation of the organization of auxiliary and service industries in agricultural enterprises. |  | ER8ER11ER12 |
| CH.D | EC | Organization of scientific research works | Considers the specifics of science, its goals, functions, types of scientific research; general scientific and special research methods; the main methods of choosing a relevant topic for research and methods of compiling a program for its implementation; Algorithmic searches of information in documentary sources of information. Skills to draw up a research program; analyze scientific literature on the topic of research. | 4 | ER8ER11ER12 |
| CH.D | EC | Conducting research in modern conditions | It studies modern research methods; carry out the methodological and practical justification of scientific research, methodically competently conduct an experiment, including using optimization elements andmultimedia technology. |  | ER8ER11ER7 |
| PD | HSC | Forest Pyrology | It studies the basics of the theory of combustion of forest materials, the causes and types forest fires, the impact of fires on forest ecosystems, methods for detecting forest fires, the organization of work to protect forests from fires, methods, methods and technical means of dealing with them, the basic labor protection requirements and safety measures for extinguishing forest fires, liability for violation of fire safety in forests, to be able to put into practice preventive measures and evaluate the fire consequences and damage to forestry. | 5 | ER 5ER 11ER 12 |
| Forest biogeocenosis and zonalforestry | PD | HSC | Forest botany | Studying the basic laws, taxonomy of agricultural plants acquire skills in conducting phyto-sanitary monitoring, a set of protective measures for agricultural plants from pests, diseases and weeds, as well as quarantine objects; conducting all stages of quarantine inspection at customs posts. | 5 | ER5ER7ER8ER10 |
| CH.D | EC | Forest management                                                                                                                                                                                                      | The study of program material should be carried out taking into account the positive changes taking place in the forestry sector, based on the achievements of domestic science and advanced forest management technology. Students should receive professional training in forestry specialists in the field of forest exploitation, harvesting, processing of wood and other forestry products. | 5 | ER11ER7ER8ER10 |
| CH.D | EC | Secondary forest management                                                                                                                                                                                  | To know and understand the modern directions of the integrated use of forest resources. Wild berries, fruits and nuts. Their nutritional value and medicinal properties. Harvesting and processing of berries, fruits and nuts. The main types of medicinal plants. Groups of medicinal plant materials. The main types of mushrooms, their nutritional and medicinal properties. |  | ER7ER11ER9 |
| CH.D | EC | Mountain and desert forestry | Features of the formation of forests in difficult terrain - mountains and deserts. Soil formation in the mountains and deserts. Forests and mudflows. The effect of the forest on surface runoff in the mountains. Water-regulating and protective forests in the mountains. The fight against water erosion. Wildlife and side use in the mountains. Cattle grazing in mountain forests. The value of solid precipitation in mountain forests. Change in soil moisture due to changes in exposure and steepness of slopes. | 5 | ER4ER5ER8ER7 |
| CH.D | EC | Mountain and desert taxation | General information about forest taxation. Tasks of forest taxation, objects and methods. Communication with other disciplines. Objects of taxation: individual tree, plantings, forest area, logging fund. Symbols and units of measurement. Tools and instruments of forest taxation. Taxation of individual trees. The laying of test areas, the average model tree, methods for its selection and bucking. |  | ER6ER10 |
| PD | EC | Forestry mechanization | To study the processes of repair production - carrying out maintenance and preventive maintenance of machines, as well as equipment of livestock farms. Acquaintance with the classification and operating principles of agricultural machinery engines, the technologies of mechanized work in animal husbandry and crop production. The experience of disassembling - assembling and adjusting work, skills, troubleshooting, and acquires skills. | 4 | ER5ER6ER11 |
| PD | EC | Loading and unloading of forestry materials | Highly efficient technological processes with the main cargoes transported by railways, as well as methods of transferring these cargoes from a narrow gauge to a wide gauge, from a railroad to water and road transport and vice versa are being studied. The discipline sets out the main provisions for the maintenance and repair of loading and unloading machines, labor protection and nature. |  | ER2ER8ER9 |
| PD | HSC | Soil science                                                                                | It studies the origin, development, structure, composition and properties of soils, and also develops measures for their protection and rational use. Cognition of the features of the relationship between soil and the terrestrial part of the biota . The role of soil in the transformation of its flora and fauna, Mastering skills in changing environmental factors on soil processes, their dynamism. | 5 | ER6ER9ER 10 |
| PD | HSC | Agrochemistry | Learning theoretically e foundations s chemicalization farming;    question's    plant nutrition, the way s    of its control; Basic properties and organic and mineral fertilizers; agrochemical is, properties and basic types of soils of Kazakhstan. Gets skills in the    proper use of fertilizers, taking into account soil and climatic conditions and biological characteristics of forest crops, and practical skills in performing agrochemical analyze. | 5 | ER6ER 8ER 10 |
| PD | HSC | Technological practice I | To consolidate theoretical knowledge, to study the experience of the enterprise, to master the practical skills and methods of organizing labor in the forestry unit. At the end of the practice, the student must be able to organize the implementation of the production program of the forestry department, workshop or forestry department, forest management team. system of labor organization and measures developed in the economy to increase its productivity. Acquisition of practical skills in setting up field experiments. | 3 | ER4ER11ER6 |
| Nursery business with the basics of statistics | PD | HSC | Biometry | It studies the biology of animal cell cultures under invitro conditions; their main principles and methods; cell growth in culture, culture of callus tissues, patterns of differentiation, morphogenesis and regeneration, healing of tree plants and clonal micro-propagation and application of biotechnology methods: haploid selection, cell selection, cell engineering and genetic engineering to create new varieties and hybrids of agricultural plants and preservation of the invitro gene pool. | 4 | ER 5ER610ER11 |
| CH.D | EC | Forest seed business | It studies the issues of creating and forming a permanent forest seed base. As well as the biology of flowering and fruiting of various species of trees and shrubs, the organization of phenological observations, accounting for seed yield, determination of sowing qualities, as well as their collection, processing, storage and transportation. Protection from pests and diseases, pre-sowing preparation and forest seed zoning. | 5 | ER 4ER 5ER 9 |
| CH.D | EC | Forest Resource Management | Forestry science with other disciplines, sciences. Objects of study and their characteristics. Structural parts of the plant community, their characteristics. Typological characteristics of forest areas. Tax descriptions and tablets. Standards for the division of land covered by forest vegetation into separate forest taxation areas. Tools and instruments of forest taxation. Forest vegetation as an integral part of natural resources. |  | ER6ER 7ER 8 |
| PD | HSC | Forest nurseries | The formation of students' ideas about the structure and species composition of forest nurseries, nurseries in providing forestry and the population with plantingacquaintance with modern technologies of growing planting material of wood crops. | 5 | ER4ER 7ER 9 |
| Improvement and registration of green spaces | PD | HSC | Landscaping of populated areas | It studies the ability to take part in the substantiation of a specific technical solution in the design, development of technological processes for the creation, operation and reconstruction of forest plantations, increasing their resistance to adverse factors, aesthetic expressiveness, the level of comfort of a person in a forest environment, its general aesthetic enrichment | 5 | ER 7ER 9ER 12 |
| PD | HSC | Landscape architecture | Formation of ownership of designing a small garden. Stylish solutions on the examples of a decorative garden: patio, Japanese garden, garden in a regular and landscape composition, modern design of a small garden. The principles of selection of plants, planting material, especially the paving of decorative paths, the placement of water structures. Engineering preparation of the territory of a small garden. |  | ER 4ER 9ER7 |
| CH.D | HSC | Lawn cultivation | It studies the history of lawns and their classification. Preparation of a plot for sowing a lawn. Granule-metric composition and improvement of soil structure are additional types of grass for the lawn. Sowing lawns. Types of rolled lawns. Lawn care activities. Mulching lawns. Types of lawns. Classification of lawn grasses. | 4 | ER4ER9 |
|  | PD | HSC | Internship Practice I | Collection of information on the activities of educational institutions and professional activities of the agronomist. Analysis of regulatory documents determining the content of education according to the updated program. The development of skills to master the practical foundations of a future profession. Development of skills in collecting and accumulating empirical material. Development of skills for structuring, systematizing knowledge and presenting it in various ways. Development of public speaking skills, presentation of reporting documentation. | 6 | ER 3ER 12 |
| Forestry complex | CH.D | EC | Forest Breeding | To know and understand general information, tasks and objects, methods of studying the discipline forest breeding. Consideration of breeding methods, increasing productivity and improving the quality of forest tree species. Modern methods for studying the variability of woody species in natural populations and in forest crops. Obtaining varieties and hybrids with high productivity potential. | 5 | ER4ER6ER7 |
| CH.D | EC | Forest accounting and assessment | He is studying a systematic set of information on environmental, economic, and other quantitative and qualitative characteristics of the forest fund. The collection, registration and inclusion in the list of rare and endangered organisms, data on rare, endangered and typical plant communities in need of special protection. Apply the acquired knowledge in practical or scientific activities. |  | ER 2ER5ER7ER 11 |
|   | CH.D | EC | Forest reclamation | Know and understand the adverse natural phenomena - drought, dry winds, dust storms, cold and blizzard winds. Types of protective afforestation, their purpose. Construction of forest strips. The influence of forest strips of various designs on the aerodynamics of the wind flow, snow distribution, temperature and humidity of the surface air layer, crop yields. Agrotechnics of creating shelterbelts. | 5 | ER5ER7ER 9 |
|   | CH.D | EC | Landscape design | Landscaping art at the junction of three areas. On the one hand, architecture, building and design, on the other hand, botany and crop production, and, on the third hand, landscape design uses information from history and philosophy. |  | ER 4ER9 |
|  | CH.D | HSC | Internship practice ІІ | Consolidation of theoretical knowledge and practical professional skills of students in forestry management. Acquisition of skills to use knowledge about the nature of the forest, in order to plan and conduct forestry activities aimed at the rational continuous sustainable use of forests, increase forest productivity. Considers technology, economics, organization and management of forestry production, service organization and working methods of forest conservation and protection engineers and production units of the economy. | 5 | ER2ER11ER12 |
| Biotechnology Forest Protection and Economic Assessment of Ecosystem Services | PD | EC | Forest protection | It studies the morphological signs of harmful insects, the features of their development and systematic position. External signs of disease, morphology and reproduction of pathogens. The species composition of pests and diseases of forest crops, their range, bio-ecological features, harmfulness. Diagnostic Methods. | 6 | ER5ER10 |
| PD | EC | Forest Entomology | The acquisition of the necessary theoretical and practical knowledge about the most important ecological and economic groups of insects, their useful and harmful activity, about specific types of insects - pests of forest and ornamental plants, about their role in forests and landscaping objects, their impact on condition and sustainability, environmental and sanitary and hygienic measures, productivity and other useful functions of forest and urban plantations, as well as modern means, methods and technologies for protecting plants from pests. |  | ER 5ER7ER 10 |
| PD | EC | Forest management | It studies the macroscopic structure of wood and bark. Methods of studying the macroscopic structure of wood and bark. The microscopic structure of wood and bark. Methods for studying the microscopic structure of wood and bark. Chemical properties of wood and bark. Organic matter in wood. Extractive substances. Physical properties of wood and bark. Characteristics that determine the texture, smell, color and luster of wood | 5 | ER 5ER7ER 10 |
| PD | EC | Forest growing | It is studying the type of forestry activities aimed at creating and growing productive forests of a specific purpose, increasing their environmental productivity. It is called upon to ensure continuous replenishment of the wood stocks cut down during the main use, and expanded into the production of forest resources. |  | ER4ER7ER9 |
| Artificial afforestation and forest taxation/On production base | CH.D | EC | Forest inventory             | Knowledge of the system of measures aimed at ensuring rational use, increasing productivity, reproduction, conservation and protection of forests, as well as improving the culture of forestry. | 5 | ER4ER6ER9 |
| CH.D | EC | Traditional forest management |  Methods for organizing efficient and rational use of forest resources and means of production and consumption of basic standards of raw materials; - principles and methods of indicative planning, the procedure for developing and approving the main indicators of economic and social development of state institutions and their units. |  | ER 5ER8ER 10 |
| CH.D | EC | Forest taxation | Knowledge and understanding of forest taxation. Tasks of forest taxation, objects and methods. Communication with other disciplines. Objects of taxation: individual tree, plantings, forest area, logging fund. Symbols and units of measurement .And the Tools and equipment forest inventory. Taxation of individual trees. The laying of test areas, the average model tree, methods for its selection and bucking. | 4 | ER 3ER8ER 11 |
| CH.D | HSC | Forest accounting  | And the study of the emergence and formation of forestry and the main stages of its development; current status and problems of forestry and forestry; features of forests, forestry and forestry; forests and forest lands as objects of forestry and forestry; fixed capital of forestry and forestry ; working capital of forestry and forestry; labor resources and labor productivity in forestry; infrastructure of forestry and forestry . Learning Skills: - draw up a cost estimate for a unit of work; - perform an analysis of the use of fixed and working capital, analysis of economic activity; - prepare reports; - keep records of forest resources in state forest institutions  |  | ER 8ER 10ER 2 |
| PD | HSC | Forest crops | The study of the discipline provides for the mastery of theoretical andpractical principles of forest seed farming, cultivation of forest cultivated planting stock, the creation and cultivation of highly productive and sustainable forest plantations for various purposes, the assimilation of agrotechnical techniques used in seed growing in forest nurseries and in the cultivation of forest cropsforest-forming species | 5 | ER 4ER5ER7 |
| PD | EC | Floral arrangements and floristry | It studies this art of creating flower arrangements in vases, balls and baskets or creating bouquets and compositions from cut flowers, leaves, herbs, decorative herbs and other botanical materials. Floral arrangements and floristry studies flowers, their meanings and combinations, but in order to master any skill perfectly, you need to know its history. This is the case with floristry: every florist should know the history of the origin of flowers. |  | ER 4ER7 |
| Module acquisition of new professional competencies | PD | EC | Minor program | Additional educational **program Minor**( **Minor**) - a set of disciplines and (or) modules and other types of educational work, defined by the student for study in order to form additional competencies   | 12 | ER 2ER3ER11 |
|  Module final certification | CH.D | HSC | Predegree or Industrial practice  | He will gain knowledge in the formation of general professional and professional competencies necessary for the development of agricultural cultivation technologies, the acquisition of industrial experience of independent work in the conditions of professional agronomic activity, and the updating of knowledge and skills in the field of agriculture in real conditions of agronomic activity. | 8 | ER 2ER11ER7 |
| CH.D | EC | Writing and defence of degree work (project) or preparing and passing a graded exam/  | Knowledge and understanding of oriented practice, as the final stage of training, are responsible for the formation of the student's independent work skills in the professional field. Successful defense of a diploma project at a meeting of the [State Certification Commission](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=https://ru.wikipedia.org/w/index.php%3Ftitle%3D%25D0%2593%25D0%25BE%25D1%2581%25D1%2583%25D0%25B4%25D0%25B0%25D1%2580%25D1%2581%25D1%2582%25D0%25B2%25D0%25B5%25D0%25BD%25D0%25BD%25D0%25B0%25D1%258F_%25D0%25B0%25D1%2582%25D1%2582%25D0%25B5%25D1%2581%25D1%2582%25D0%25B0%25D1%2586%25D0%25B8%25D0%25BE%25D0%25BD%25D0%25BD%25D0%25B0%25D1%258F_%25D0%25BA%25D0%25BE%25D0%25BC%25D0%25B8%25D1%2581%25D1%2581%25D0%25B8%25D1%258F%26action%3Dedit%26redlink%3D1) is the legal basis for assigning a student the appropriate qualifications.   | 12 | ER 2ER3ER11 |
| Total for the educational program |  |  |

**AGREEMENT SHEET**

according to the Educational program 6В08150- “ Protection and quarantine of forestry ”

Director of DAV \_\_\_\_\_\_\_\_\_\_\_\_\_\_

 signature

Director of NRU \_\_\_\_\_\_\_\_\_\_\_\_\_\_

 signature

Director of DNiP \_\_\_\_\_\_\_\_\_\_\_\_\_\_

 signature

*Annex 1*

**REVIEW**

for the educational program in the specialty 6В08150- "Protection and quarantine of forestry", developed by a team of teachers of the department "Vegetable growing and animal husbandry", “Agrarian” faculty,  SKSU M. Auezov.

The educational program in the specialty 6B08310- “ Protection and Quarantine of Forestry ” was created on the basis of a request from employers in connection with the increased need for forestry agronomists who can assess the prospects of development of the economy in the market, draw up technological maps for the cultivation of forest crops and organize field work, count farm needs for seeds, fertilizers, pesticides, fuels and lubricants, agricultural machinery, implements and machinery, labor resources, assess the quality the nature of the work performed. The main goal of the program is as follows:

-Training of specialists who have theoretical and practical knowledge in the forestry field, in the position of an engineer of forest crops, forester, assistant forester, engineer for forest protection and protection, master of forest nursery, master landscaper

- gain deep theoretical knowledge and practical skills in accounting and protection of forest resources, forest management, creating forest crops and growing planting stock

- those who are able to apply the acquired knowledge, evaluate and analyze the current state of forestry development, as well as those who are able to formulate and make effective solutions to production problems .

The purpose of the program is the direction of training in the educational program of the specialty 6В08150- “Protection and Quarantine of Forestry” implies a clear orientation to the future, which is manifested in the possibility of building your education, taking into account success in personal and professional activities.

Programs directed to satisfaction studying needs of states, region, and employee agreed with national priorities of development strategic development of University. Directed practical using the knowledge on self improvement and getting the knowledge during the all cycle of choosing educational specialty.

Education program on the specialty 6В08150 - “Protection and Quarantine of Forestry”, can be recommended for use in the educational process of higher educational institutions.

Director of the

«GKKP "Shymkent State Arboretum

named after A. Askarov"» B.M.Moshkalov

**EXPERT CONCLUSION**

to the educational program of higher education in the field of specialist training 6B08310- " Protection and Quarantine of Forestry "   qualification "Bachelor", developed by a team of teachers of the department "Vegetable growing and animal husbandry" faculty "Agrarian" SKSU M. Auezov.

              The peer-reviewed educational program (here in after EP) in the direction of preparation 6В08110- “Agronomy” is a system of documents developed on the basis of SCES in the direction of preparation 6В08150- “Protection and Quarantine of Forestry”   (undergraduate level), approved by order of the Ministry of Education and Science of the Republic of Kazakhstan. The peer-reviewed program includes: general characteristics; a characteristic of the professional activity of a bachelor; competencies of the graduate of the Bachelor EP, formed as a result of mastering the undergraduate program “Protection and Quarantine of Forestry”; documents governing the content and organization of the educational process during the implementation of the undergraduate program ; actual resource support for the undergraduate program; characterization of the university environment, ensuring the development of general cultural (social and personal) competencies of graduates; assessment funds for conducting intermediate and state final certification and other regulatory and methodological documents and materials ensuring the quality of students' training. The EP regulates the goals, expected results, content, conditions and technologies for the implementation of the educational process, assessing the quality of graduate training in this area of ​​training and includes: the curriculum, work programs of training courses, subjects, disciplines (modules) and other materials ensuring the quality of training students, as well as educational and undergraduate practice programs, a calendar curriculum and teaching materials that ensure the implementation of appropriate educational technology. The strategic goal of the EP is to train highly qualified specialists who are able to manage research and development processes and innovative activities in organizations of any legal form. The education program meets the basic requirements of the standard. State final certification includes the preparation and defense of the bachelor. The content of the EP does not contradict SCES. The calendar training schedule is drawn up in accordance with the requirements. The disciplines of the curriculum for the peer-reviewed educational program form the entire necessary list of general cultural, general professional and professional competencies provided by the SES. Among the competitive advantages of the program, it should be noted that quite experienced faculty as well as leading practitioners of agricultural production are involved in its implementation. One of the advantages is taking into account the requirements of employers in the formation of the disciplines of the compulsory part, which in their content allow ensuring the competence of the graduate. The quality of the content of the curriculum is not in doubt. Disciplines included in the plan reveal the essence of current economic problems. The structure of the curriculum is generally logical and consistent. Evaluation of the work programs of academic disciplines allows us to conclude that they are of high quality and a sufficient level of methodological support. The content of the disciplines corresponds to the competency model of the graduate. Educational work of students in the EP on the direction of training 6V08310-”Protection and quarantine forestry" , organized in the course of preparation of bachelors in the following forms: lectures, consultations, seminars, workshops, laboratory work, examinations, colloquiums, independent work, research work, practice. In the educational process of peer-reviewed first EP is expected the use of active and interactive forms of training, including discussions, business games, analysis of case studies, training, project-based learning, work in small groups and others. Teaching practice involves the study of interactive forms of training, to deliver a report on the autopsy meeting of the scientific and methodological conference SKSU them. M. Auezova . The content of the undergraduate practice program testifies to its ability to form students' practical skills. The basis for pre-diploma practice is the training and production facilities of SKSU “ Kaynarbulak” and “Zhas Keshu”, “Sairam-Ugam” State National Nature Park, the “Aksu-Zhabagy” State Nature Reserve, the Forestry and Hunting Committee of the Ministry of Agriculture of the Republic of Kazakhstan, the “Zhasyl Aymak” SU Department of Natural Resources and Environmental Management of Turkestan Region, "Shymkent State arboretum", LLP "Dala Fruit", LLP "Ken tau", LLP "Kok Tal", LLP " Kazagronom", LLP “Agro Group Holding".

Research work includes research activities and the preparation of final qualification work (bachelor's thesis). In the course of the research work, it is proposed to use such forms as participation in the scientific seminar of the department with the preparation of their own presentations; reports on the results of scientific research at seminars, conferences, symposiums and scientific schools, publication of materials in relevant final collections and works; participation in the preparation of competitive applications for research, scientific reports; preparation of publications in scientific journals, including those recommended by the Ministry of Education and Science of the Republic of Kazakhstan for publishing the results of diploma studies; search for relevant information on the subject of scientific research; participation in programs of international and within Kazakhstan mobility of bachelors; conducting both independent research and joint research with a sonic leader. In accordance with the requirements of the State Educational Standards of Education for the certification of students for compliance with their personal achievements by the phased requirements of the relevant EP, funds have been created for evaluating funds for monitoring performance and intermediate certification.

        These funds include control questions and sample assignments for practical exercises, tests, call-offs, tests and exams; tests and computer testing programs; approximate topics of essays, etc., as well as other forms of control, allowing to assess the degree of formation of students' competencies. The developed EP fully corresponds to the declared level of preparation of the bachelor. The envisaged disciplines form a high level of competencies provided by the SES. Provision of teaching staff with academic staff meets the standards. The material and technical support of the educational process in the direction of preparation "Agronomy" fully complies with the requirements of the State Educational Standard.

     The developed EP has a high level of security with educational and methodical documentation and materials. The programs of all declared disciplines, practices (SRW) and final state certification are presented. The quality of the peer-reviewed OP is not in doubt. The program “Protection and Quarantine of Forestry” can be used to prepare students of the qualification “Bachelor” in direction 6B08310- “Protection and Quarantine of Forestry”

Chairman of the expert commission:

Dean of the Agrarian Faculty,

Candidate of Biological Sciences: A.K. Zhylkybaev

 Members of the expert commission:

1. Candidate of Agricultural Sciences,

Senior teacher of the Department "VG and AH" L.A. Fayzullaeva

2. Candidate of Veterinary Sciences, Associate Professor

Department of "VCD I.A. Tutkyshbay