

## **Accreditation Report**

**Kazakh National Agrarian University  
Almaty, Kazakhstan**

**„Veterinary Medicine“ (Bachelor /Master), „Veterinary Sanitation“ (Bachelor / Master),  
„Biotechnology“ (Bachelor /Master), „Plant Science and Technology“ (Bachelor),  
„Food Safety“ (Master) and „Veterinary Food Safety and Technology (Bachelor)**

### **I Procedure**

**Initial accreditation of the study programmes „Veterinary Medicine“ (Bachelor/Master), „Veterinary Sanitation“ (Bachelor/ Master), „Biotechnology“ (Bachelor/Master) and „Food Safety“ (Master) on 31 March 2015 by ACQUIN until 30.09.2020: temporary accreditation until 30.09.2021**

**Date of contract: 14 September 2020**

**Date of the submission of self-assessment report: 16 April 2021**

**Date of site-visit: 17-18 May 2021**

**Attendance by ACQUIN office: Dr. Lyazzat Nugumanova**

**Accreditation decision: 27 September 2021**

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- **Prof. Dr. Johannes Seeger**, University of Leipzig, Professor for Histology and Embryology, Veterinary Specialist for Anatomy
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- **Tanja Sonnewald-Daum**, PhD Student Veterinary Medicine, Ludwig-Maximilians-Universität München

The **Assessment Report** of the peer-review experts is **based on** the self-assessment report of the Higher Education Institution (HEI) and extensive discussions with the HEI management, deans and/or heads of the departments, heads of study programme(s), lecturers, staff representatives, students, and alumni.

The basis of the **Assessment Criteria** is part 1 of the “Standards and Guidelines for Quality Assurance in the European Higher Education Area” (ESG) in the current official version. At the same time the national context, particularly the national regulations regarding the establishment of study programmes, are taken into account.

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## **II Introduction**

The experts would like to thank the representatives of the HEI as well as students that they have taken part in the discussions and willingly shared information and their views during the online visit. The discussions are valuable not only for the assessment of the institution, but also for a better understanding of the legal and sociocultural context of the local higher education system.

Evaluation basis for the peer-review experts is the self-assessment report of the HEI as well as intensive discussions during the site visit with the HEI management, deans and/or heads of the departments, heads of the study programmes, study programmes coordinators, teachers, lecturers, administrative staff, students, and graduates.

Main objective of the accreditation procedure is to assess the quality of the study programmes and compliance with the "Standards and Guidelines for Quality Assurance in the European Higher Education Area" (ESG). The ESG standards are applied as main assessment criteria in the international accreditation procedure. In addition, the respective country-specific criteria and standards are taken into account.

A group of experts was set up, which ensured that all areas relevant to the accreditation procedure (e.g. legal, structural, social etc. aspects) were considered. The peer-review experts include professors, representatives of the professional practice and the student representative. A certificate with the ACQUIN seal is awarded upon accreditation of the study programme(s).

### **1 Short profile of HEI**

The Kazakh National Agrarian Research University (KazNARU) was established in 1996 on the basis of two institutes: the Almaty Zoo-Veterinary Institute, which was founded in 1929, and the Kazakh Agricultural Institute founded in 1930. In 2001, by the Decree of the President of the Republic of Kazakhstan (RK), N. A. Nazarbayev, the university was granted the status of a National University. In 2010, KazNARU began to transform into a National Research University and was awarded the status of an innovation-oriented university.

The university offers 212 study programmes including 48 bachelor's degree programmes, 129 master's degrees and 35 doctorate degrees programmes. The student body of the university consists of 8246 students, including bachelor's degree-7551, master's degree-477, doctoral degree-218.

The university has a highly qualified teaching staff – 751 teachers, including eleven academicians of the National Academy of Sciences of the RK, 66 doctors of science, 227 candidates of science, 66 holders of PhD, 240 masters of science and 359 administrative staff.

KazNARU has five faculties: “Agrobiology”, “IT-technologies, automation and mechanization of the agro-industrial complex”, “Water, land and forest resources”, “Veterinary”, “Technology and Bioresources”, as well as “Institute of Social and Humanitarian Education and Upbringing by O. Suleimenov” and the Higher School “Business and Law”.

## **2 Results of the previous accreditation**

The study programmes “Biotechnology” (Bachelor/Master), „Veterinary Medicine“(Bachelor/Master), „Veterinary Sanitary“ (Bachelor/ Master) and „Food Safety“(Master) were examined and accredited by the ACQUIN for the first time in 2015.

For further development of the study programmes, the following recommendations were formulated (translation from German):

### General recommendations:

- The recognition of study and examination achievements acquired abroad in the sense of the Lisbon Convention should be provided as a rule for the equivalence of acquired competences. This regulation should be documented in the university's regulations.
- The expert group supports the university's efforts to obtain more autonomy in the design of the study programmes. In this context, the general education subjects in particular should be replaced by specialised subjects in the curricula as soon as the university obtains the corresponding authority to do so.
- The necessary equipment for modern analytical techniques is partly not available or is available in small quantities and should therefore be expanded.
- In order to improve the international compatibility of the degree programmes and to increase the mobility of the students, foreign language competence should be promoted. For this purpose, more suitable courses should be offered in English.
- The higher education institution should in an appropriate way ensure the transparency of the academic performance levels of students and graduates. In order to link up with international standards, it is recommended that the awarding of credit points be aligned with the valid version of the ECTS Users' Guide.
- In order to progress towards becoming an internationally recognised research university, the experts recommend inviting more dedicated guest lecturers and specifically promoting bilateral exchange to implement modern teaching concepts, laboratory methods and bi-lateral research projects.

- The already planned modernisation of faculty buildings and clinical facilities is strongly supported and should be implemented quickly. The equipment of numerous laboratories should be completely renewed during this renovation.
- The installation of modern audiovisual technology in the seminar rooms and lecture halls should be considered in the renovation concept.
- Against the background of the aspired increased internationalisation, the international or European laboratory practice standards should be taken into account in all practical training areas.

#### Recommendations „Biotechnology“ (Bachelor):

- An internationally comparable level of knowledge in the safe application of molecular biological methods should be achieved. Current analytical methods (e.g. PCR and ELISA) should therefore be integrated into the programme with their practical application in the curriculum.

#### Recommendations „Biotechnology“ (Master):

- The breakdown of the degree programme into three specialisations is ambitious and requires the major spread of a high-quality curriculum over a relatively small number of students. This diversification has only existed since 2011/12 and should be evaluated internally at the university in about two years, i.e. after two complete cycles.

#### Recommendations “Food Safety” (Master):

- It is recommended that during the planned renovation at the faculty, the equipment of the chemical-analytical and physical laboratories be upgraded according to international requirements. In addition, a sensory laboratory should be established, as sensory analysis is an important part of food evaluation.
- Laboratory-analytical training content should be given greater consideration. With the aim of intensifying training in the chemical-analytical area, at least one separate module should be provided for this, into which training components from the modules SAB-MKKBPP5208 and MR6303 are transferred.
- The relationship to subsequent employment is questionable in the case of the IFN5201 and Psi5203 modules. After implementation of the reform of the school system currently taking place (broadened foundations), these subjects should be dropped in favour of specialist content.
- In the further development of the study programme, the module handbook should be edited. In the module handbook, identical module objectives are formulated for the

modules PB6305 and GFP6308. Since these are different modules, the description of the competence goals should also be differentiated.

#### Recommendations „Veterinary Medicine“ (Bachelor):

- It is recommended that the module descriptions of the degree programme should show more transparently and comprehensibly in which courses the desired prerequisites for taking modules in the degree programme can be acquired.
- Training in the basic subjects of morphology and physiology should be strengthened.
- The lecturers in the clinics should themselves also work clinically and practically in teaching and research, and should continuously improve their qualifications.
- To improve veterinary training, the proportion of practical training elements in agriculture, in the laboratory and on live animals should be expanded.
- In order to enable a corresponding expansion of the anatomical components of training, the human and material resources in the department of anatomy should be expanded.
- In the subjects of biochemistry and physiology, adequate academic staffing should be ensured and the proportion of these subjects in the curriculum should be reviewed.
- The comprehensive renovation and re-equipping of pre-clinical and clinical laboratories and clinic rooms is urgently recommended. The international standards of occupational safety, animal welfare, radiation safety (imaging), hygiene and laboratory organisation should be fully established.

#### Recommendations “Veterinary Sanitary” (Master):

- It is recommended that the module descriptions of the degree programme describe more transparently and comprehensibly in which courses the desired prerequisites for attending modules in the degree programme can be acquired.

A temporary accreditation was issued for the proper implementation of the ACQUIN reaccreditation procedure. The application was approved and the temporary accreditation of the study programme was issued until 30.09.2021.

### **3 General information on the study programmes**

All study programmes being accredited are offered as full-time.

The bachelor’s and master’s study programmes “Veterinary Medicine” are offered by the departments of “Biological Safety”, “Microbiology, Virology and Immunology”, “Obstetrics, Surgery and Biotechnology of Animal Reproduction” and “Clinical Veterinary Medicine”. The

standard period of study of bachelor's programme is 10 semesters (309 ECTS credits). Master's programme is offered in two directions scientific and pedagogical (4 semesters duration/120 ECTS credits) and profile directions (3 semesters /90 ECTS credits and 2 semesters/60 ECTS credits).

The bachelor's and master's study programmes "Veterinary Sanitation" and bachelor's programme "Veterinary Food Safety and Technology" are offered by the department of "Veterinary Sanitary Examination and Hygiene". The standard duration of study of bachelor's degree "Veterinary Sanitation" is 10 semesters (300 ECTS credits). Master's programme is offered in two directions scientific and pedagogical and profile directions. Study duration of scientific and pedagogical direction is 4 semesters (120 ECTS credits). Study duration of profile direction is 3 semesters (90 ECTS credits) and 2 semesters (60 ECTS credits). Standard period of study of a bachelor's programme "Veterinary and Food Safety and Technology" is 10 semesters (306 credits).

Bachelor and master programmes "Biotechnology" and master's degree "Food Safety" are offered by the Department of Food Technology and Safety. The study duration of bachelor's degree "Biotechnology" is 8 semesters (242 ECTS credits). Master's programmes are offered in two directions scientific and pedagogical (4 semesters duration/120 ECTS credits) and profile directions (3 semesters /90 ECTS credits and 2 semesters/60 ECTS credits).

The bachelor's study programmes "Veterinary Food Safety and Technology" and "Plant Science and Technology" were developed in collaboration with the Wageningen University and are offered at KazNARU since 2020. The programme "Veterinary Food Safety and Technology" is offered by the KazNARU department of "Veterinary Sanitary Examination and Hygiene". The standard period of a programme is 10 semesters (306 ECTS credits). The study programme "Plant Science and Technology" is offered by the department of "Fruit, Vegetable and Nut Growing". The study duration of a programme is 8 semesters (242 ECTS credits).

### III Implementation and assessment of the criteria

#### 1 ESG Standard 1.1: Policy for quality assurance

**Institutions should have a policy for quality assurance that is made public and forms part of their strategic management. Internal stakeholders should develop and implement this policy through appropriate structures and processes, while involving external stakeholders.**

##### 1.1 Implementation

In order to maintain the mission, vision, objectives and develop a quality culture, the university discussed and adopted a Quality Assurance Policy (approved by the decision of the Academic Council No. 1 of August 31, 2019) (hereinafter referred to as the Policy).

The development and dissemination of the university's Policy is provided by the Quality management system sector.

The Policy is publicly available on the website of the university. The university has a documented procedure "Development and approval of a Quality Assurance Policy". In accordance with the procedure, all stakeholders participate in the development of the Policy. The Policy is approved by the decision of the Academic Council of KazNARU. The Policy is analysed by the management for compliance with the strategic directions, goals and objectives of the university and external contexts.

In accordance with the European Standards and Guidelines for Quality Assurance (ESG), strategic goals and objectives, and national context, the university Policy was updated in 2019.

The draft Policy was presented to both internal and external stakeholders for discussion and suggestions. The updated Policy focuses on creating an educational environment that promotes the active involvement of students in quality assurance processes. Cooperation with employers and promotion of the entrepreneurial spirit of students are stressed as an important principle of quality assurance. This aspect is reflected in study programmes, in the involvement of employers in the educational, research processes and in the development of diploma/master's / doctoral works.

##### 1.2 Assessment

The university has a comprehensive policy for quality assurance that is publicly available in local languages. Internal stakeholders such as teaching and administrative staff as well as students were actively involved in the development of the policy. External stakeholders are involved through various structures of the university.

The degree programmes of the university are conducted by means of several national development strategies and laws. In addition, activities are carried out by "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 RK (May 18, 2020, No. 207). The development and dissemination of the university's policies is provided by the Quality Management System. The relevant documents and information are available online on the university's homepage as well. Considering the existing policies, the expert group concludes that a continuous development between research and education is provided.

Three departments for academic affairs, education, and research have their own quality assurance management. They deal with quality management, principles of teaching, accreditation, as well as national and international ranking of the study programmes.

Various councils, experts' consultations and evaluations help to further develop study programmes. The procedures and corresponding measures are appropriate and implemented.

Equal opportunities are considered at the university and correspond to the national requirements. Proportion of female students and teaching staff is high.

Since 2016 an ISO standard of anti-corruption was implemented at the KazNARU.

### 1.3 Conclusion

The criterion is **fulfilled**.

## 2 ESG Standard 1.2: Design and approval of programmes

**Institutions should have processes for the design and approval of their programmes. The programmes should be designed so that they meet the objectives set for them, including the intended learning outcomes. The qualification resulting from a programme should be clearly specified and communicated, and refer to the correct level of the national qualifications framework for higher education and, consequently, to the Framework for Qualifications of the European Higher Education Area.**

### 2.1 Implementation

#### Overview

At the design stage, teaching staff and heads of departments study the specified normative documents to identify the main requirements for the content of disciplines / modules and the competencies being formed, taking into account the National Qualification Framework (NQF), the European Qualifications Framework (EQF), professional and / or industry standards and the labor market, and employers' requirements.

The department develops the initial version of the study programme, which is considered at the meeting of the department. The study programme is developed by the department for each

level (bachelor's, master's) in three languages Kazakh, Russian and English. The department's decision and draft are sent for consideration and approval to the Academic Council.

The Academic Council, together with employers and students, conducts the approval procedure. The participation of employers at the meeting provides an opportunity to identify new competencies, expectations of the professional community, and update the content of existing courses/modules. Employers make recommendations when forming the modules of the study programme and consider elective disciplines that are significant and relevant in professional training. The participation of students and graduates provides an opportunity to identify the needs of students, who may also offer the inclusion of new learning outcomes/competencies.

The study programme is approved by the rector on the basis of a positive decision of the Academic Council. The approved study programme is entered in the database of the "PLATONUS" system.

The study programme is reviewed annually by the University's Academic Affairs Department. The meetings are attended by employers, students and external experts to discuss the content of the programme, which is reflected not only in the reports of the department, but also in the reports of the department meeting, which develops corrective and preventive actions for comments and inconsistencies.

The content of all Bachelor programmes includes general education subjects (GES). The volume of the GES cycle in all bachelor programmes is 56 ECTS credits. General education subjects include disciplines such as modern history of Kazakhstan, philosophy, Kazakh (Russian) language, foreign language, information and communication technologies (in English), social and political knowledge (political science, sociology, cultural studies, psychology), law and anti-corruption culture, economics, ecology, basics of life safety and physical education.

All master's programmes are offered in two directions scientific and pedagogical and profile directions.

### **„Veterinary Medicine“ (Bachelor)**

The main objective of the study programme is to train a highly qualified veterinary specialist with the necessary knowledge and skills in the field of diagnosis, treatment and prevention of animal diseases; organization and planning of a complex of veterinary work and control of the effective and rational use of biological products, as well as adapted and competitive to the modern labor market

The duration of the study programme is 10 semesters (309 ECTS credits).

The structure of the programme consists of three cycles of disciplines – general education disciplines (56 ECTS credits), basic disciplines (149 ECTS credits), profile disciplines (92 ECTS credits) and a final state assessment (12 ECTS credits).

Basic disciplines include: “The Structure and Function of the Animals Organisms”, “Professional Communication”, “Biological Aspects in Veterinary Medicine”, “Basics of Zootechnics and Sanitation”, “Bases of Diagnosis of Animal Diseases”, “Pathology of Animals”, “Health of animal breeding”, “Non-infectious pathology of animals”, “Legislation and Expertise in Veterinary Medicine”, “Infectious Pathology of Animals”, “Veterinary safety” and “Practical aspects of veterinary”.

Students can choose between five educational trajectories: “Diagnostics and therapy of animal diseases”, “Veterinary fertility science and surgical pathology”, “Biological safety in case of infectious animal diseases”, “Biological safety in invasive animal pathology” and “Nosology of infectious diseases of animals and birds”.

The study programme includes following types of practice: educational, industrial and pre-graduate.

### **„Veterinary Medicine“ (Master)**

The main objective of the study programme is to provide conditions for obtaining high-quality professional education, professional competence of veterinarians, methods of scientific knowledge and analysis of the scientific and theoretical foundations for the implementation of abilities in the research and pedagogical sphere. The study programme aims to train comprehensively educated personnel with in-depth knowledge in the field of veterinary medicine, methods of experimental research.

The master’s programme is offered in scientific-pedagogical and profile directions. Duration of study of a scientific-pedagogical degree is 4 semesters (120 ECTS credits). Duration of a profile direction programme is 3 semester (90 ECTS credits) or 2 semesters (60 ECTS credits).

The master's degree in the scientific and pedagogical direction is aimed at training of scientific and scientific-pedagogical personnel for universities and scientific organizations with in-depth scientific, pedagogical and research training. Graduates are thus qualified to teach at the universities.

The master’s degree in the profile direction is intended to train specialists for further occupation in the industry or in state bodies.

The master's study programme of the scientific and pedagogical direction consists of theoretical training (84 ECTS credits), including the study of basic (35 ECTS credits) and major disciplines (49 ECTS credits), research work including an internship and a master's thesis (24 ECTS credits) and a final certification (12 ECTS credits).

The curriculum of the profile direction with a study duration of 1.5 years is structured into theoretical training (60 ECTS credits) which includes core subject cycle (15 ECTS credits) and major subject cycle (45 ECTS credits), experimental research work including an internship and a Master's thesis (18 ECTS credits) and a final attestation (12 ECTS credits).

The curriculum of the profile direction with a study duration of 1 year is structured into theoretical training (35 ECTS credits) which includes core subject cycle (10 ECTS credits) and major subject cycle (25 ECTS credits), experimental research work including an internship and a Master's thesis (13 ECTS credits) and a final attestation (12 ECTS credits).

The programme of both directions offers five educational trajectories: "Diagnostics and therapy of animal diseases", "Veterinary Fertility Science and Surgical Pathology", "Biological safety in infectious animal diseases", "Biological safety in invasive animal pathology" and "Nosology of infectious diseases of animals and birds".

Scientific and pedagogical direction of the programme includes two types of practices, which are carried out in parallel with theoretical training or in a separate period: pedagogical practice is conducted at the university in the attached departments and a research practice conducted at the place of the thesis.

The study programme of the profile master's programme includes an industrial practice.

### **„Veterinary Sanitation“ (Bachelor)**

The main purpose of the study programme "Veterinary sanitation" is to train highly qualified specialists who are competitive in the labour market to ensure veterinary and sanitary and food safety of the Republic of Kazakhstan.

The curriculum consists of cycles of general education, basic and profile disciplines. Cycle of basic disciplines includes modules "Regulatory processes of the body's vital activity", "Professional communication", "Bioresources and veterinary sanitation", "Veterinary and sanitary safety", "Pathomorphological diagnostics and toxicological analysis", "Radiobiology with applied diagnostics and methodology of scientific research", "Veterinary and sanitary expertise and food safety", "Infectious animal diseases and legislation in veterinary medicine", "Technology hygiene and radiation safety of products".

The bachelor programme offers two trajectories: "Veterinary sanitation and food safety" and "State veterinary and sanitary control and supervision".

Students need to take following types of practices: educational, industrial and pre-graduate.

### **„Veterinary Sanitation“ (Master)**

The programme is offered in two directions: scientific and pedagogical and profile directions. The study duration of scientific and pedagogical direction is 4 semesters (120 ECTS credits). The study duration of profile direction is 3 semesters (90 ECTS credits) or 2 semesters (60 ECTS credits).

The purpose of the study programme “Veterinary Sanitation” (scientific and pedagogical direction) is to prepare highly qualified masters of veterinary sciences who are competitive on the labour market for work in higher educational institutions, research organizations and economic entities of the Republic of Kazakhstan, countries of the near and far abroad.

Scientific and pedagogical direction master’s degree includes a theoretical training and professional practice (84 ECTS credits), a research work including an internship and a master’s thesis (24 ECTS credits) and a final certification (12 ECTS credits).

The scientific and pedagogical direction includes following modules “Scientific communication and organization of the learning process in higher education”, “Project management with business solutions in business activities, development of conflict resolution techniques and methodology of scientific research in veterinary sanitation”. The programme can be studied in two trajectories “Product quality expertise and safety” and “Hygiene and sanitation”. Students of the first trajectory study modules “Modern problems of food safety and innovative methods of their solution” and “Veterinary and sanitary examination of products of industrial poultry and fish farming, including at small enterprises”. Students of the second trajectory study the following modules “Environmental health and sanitation and radiation safety” and “Environmental hygiene and sanitation and assessment of microclimate parameters at dairy farm facilities”.

The purpose of the study programme “Veterinary Sanitation” (profile direction) is to prepare highly qualified graduates who are competitive in the labour market, have professional competencies in the field of veterinary sanitation, to work in state enterprises and economic entities of the Republic of Kazakhstan, countries of near and far abroad.

Master’s degree of 1.5 years duration consists of a theoretical and professional training (60 ECTS credits), an experimental research work including internship and master’s project implementation (10 ECTS credits) and final certification (12 ECTS credits). Master’s degree of 1 year duration consists of a theoretical and practical training (35 ECTS credits), an experimental research work including internship and master’s project implementation (13 ECTS credits) and a final certification (12 ECTS credits).

The profile direction programme offers two trajectories “Product quality expertise and safety” and “Hygiene and sanitation”. Students of both profile direction with duration of study of 1 and 1.5 years take following modules” Scientific communication and organization of the learning process in higher education”, “Modern problems of food safety”, “Problems of veterinary sanitation” and “Project management with business solutions in business activities, development of conflict resolution techniques and methodology of scientific research in veterinary sanitation”.

### **„Biotechnology“ (Bachelor)**

The main objective of the study programme is to train highly qualified specialists-biotechnologists with professional skills in developing a methodology for obtaining drugs and products for the agro-industrial complex.

Graduates can work in research institutes and higher educational institutions of biotechnological, biological, medical, agricultural profile as a laboratory assistant, they are able to handle modern equipment, conduct research and process primary data with biometric processing; as a specialist in local administration and the State Department of Agriculture, collect information and analyse the current state of affairs, production enterprises of the food and processing, microbiological, pharmaceutical industries; botanical gardens and breeding stations; a teacher in a secondary school for teaching biological subjects.

The content of the study programme consists of three cycles of disciplines – general education subjects (GES), core subjects (CS) and major subjects (MS). The GES cycle includes the disciplines of the compulsory component (CC), the university component (UC) and the optional component (OC).

The disciplines of the UC and (or) OC of the GES cycle are at least 5 ECTS credits, which are aimed at developing students' competencies in the field of economics and law, the basics of anti-corruption culture, ecology and life safety, as well as entrepreneurial skills, leadership, and innovation sensitivity.

The core and major subjects cycles include the UC and OC disciplines. The basic discipline cycle includes the study of academic disciplines and the passage of professional practice and is at least 112 ECTS credits. The major subjects cycle includes academic disciplines and types of professional practices, the volume of which is at least 60 ECTS credits in the total volume of the educational program of higher education.

Core subjects cycle includes following modules: “Regulatory processes of the body’s vital activity”, “Professional communication”, “Molecular fundamentals of biotechnology” and “Biotechnology by industry”. Major subjects cycle includes modules: “Industrial biotechnology” and “Applied biotechnology”.

The practical training includes following types: educational, industrial and pre-graduate. Educational practice is organized at the university during the period of theoretical training. To pass the production and pre-graduate practice, contracts are concluded with the major organizations.

### **„Biotechnology“ (Master)**

The university offers the programme in two directions: scientific and pedagogical direction and profile direction. The scientific and pedagogical direction programme has a duration of two years (120 ECTS credits). Profile direction is offered in duration of 1.5 or 1 year (90 or 60 ECTS credits).

The purpose of the study programme with a scientific and pedagogical direction is to train highly qualified biotechnologists focused on the industrial and innovative development of the country, as well as to train scientific and pedagogical personnel for higher educational institutions and colleges.

The purpose of the study programme with a profile direction is to train competitive personnel on the labour market in biotechnology for state, local, regional, and foreign institutions.

After completing the programme, graduates can work in the public service, as researchers and leading specialists in research institutes and higher educational institutions in microbiological, biochemical, pharmaceutical, and food laboratories, on farms, in national parks, botanical gardens, breeding stations, industrial and commercial and educational institutions, and engage in private business. Graduates are qualified for an admission to a PhD programme.

The structure of the master's degree programme is: 1) theoretical training, including the study of cycles of basic and core disciplines; 2) practical training of undergraduates: various types of practical training, scientific or professional internships; 3) research work (master’s thesis of experimental research work depending on the degree direction); 4) final certification.

The master's degree programme of the scientific and pedagogical direction contains theoretical training and professional practice (84 ECTS credits), research work of the master's student, including the internship and the implementation of the master's thesis (24 ECTS credits) and a final certification (12 ECTS credits).

In the master's programme of scientific and pedagogical direction, the volume of the CS cycle is 35 ECTS credits, MS-49 ECTS credits. The university component of the CS cycle of all

master's degree programs of the scientific and pedagogical direction includes the following disciplines: "History and Philosophy of Science", "Foreign language (professional)", "Higher School Pedagogy", "Management Psychology".

The master's degree programme of the profile direction contains theoretical training and professional practice (60 ECTS credits for 1.5 years of study and 35 ECTS credits for 1 year of study), experimental research work, including internship and master's project implementation (18 ECTS credits for 1.5 years of study and 13 credits for 1 year of study) and a final certification (12 ECTS credits.)

The university component of the core subjects cycle of the profile direction includes the disciplines: "Management", "Management Psychology" and "Foreign language (professional)".

The volume of the core subjects cycle in the master's programme of the profile direction is 10 ECTS credits (study duration of 1 year) and 15 ECTS credits (study duration of 1.5 years), the volume of the major subjects cycle is 25 ECTS credits (study duration of 1 year) and 45 ECTS credits (study duration of 1.5 years).

Students of both directions can choose between two educational trajectories "Biotechnology in the food industry" and "Green biotechnology and food safety".

### **„Plant Science and Technology“ (Bachelor)**

The main objective of the study programme is to train a competent agronomist (breeder, seed grower, for plant protection and greenhouse management) capable of applying innovative agricultural technologies and genetic, biotechnological methods in plant breeding. After graduation students can work as agronomist for breeding and seed production, horticulturist, agronomist-agrochemist or as agronomist for plant protection.

The study duration of the programme is 8 semesters (242 ECTS credits). The curriculum is structured into General Education Subjects (56 ECTS credits), core subjects (114 ECTS credits), major subjects (60 ECTS credits) and a final assessment which includes final thesis and passing a comprehensive exam (12 ECTS credits).

The core and major subjects cycle includes following modules: "Chemistry in crop production", "Fundamentals of agribusiness and statistics", "Basic plant science", "Plant genetics and biotechnology", "Plant breeding and seed production", "Complex plant protection", "Production of fruit and vegetables", "Sustainable soil and plant nutrition management", "Research Methodology and Data Analysis".

The students take following internships: educational, industrial, pre-graduate.

**„Food Safety“ (Master)**

The study programme is offered in two directions scientific and pedagogical and profile directions. Duration of study scientific and pedagogical direction is 4 semesters (120 credits) and in profile direction 3 semesters (90 credits) and 2 semesters (60 credits).

The main purpose of the programme "Food safety" is to train highly qualified specialists in providing expertise services in the process of assessing the compliance of food products with the requirements of technical regulations (by product type) and technical regulations on food safety, the legislation of the RK in the field of technical regulation, state, local, regional, foreign institutions and universities.

Graduates of the scientific and pedagogical direction programme should be able to implement scientific, practical and pedagogical activities in universities, to promote the skills to formulate and solve timely scientific and practical problems at the intersection of sciences, to successfully carry out research and management activities in various institutions of the appropriate profile, acquire minimum knowledge in the field of university pedagogy and psychology and practical experience in teaching in educational institutions etc.

Graduates of the profile direction should be able to use the basic laws of natural science disciplines, methods of mathematical analysis and modeling, theoretical professional knowledge to solve professional problems in their activities, work with technical documentation; develop technological documentation (technological standards, instructions, work schedules, estimates, plans, applications for materials and equipment, etc.); perform work on analysis, systems for modeling the safety of products, processes and production etc.

The master's degree programme of the scientific and pedagogical direction consists of theoretical training and professional practice (84 ECTS credits), research work of a student, including internship and master's thesis (24 ECTS credits) and a final certification (12 ECTS credits).

The master's degree programme of the profile direction consists of theoretical training and professional practice (60 ECTS credits in a programme of 1.5 years duration and 35 ECTS credits in a programme of a 1-year duration), experimental research work of a student, including internship and master's project implementation (18 ECTS credits in a programme of 1.5 years duration and 13 ECTS credits in a programme of 1 year duration and a final certification (12 ECTS credits).

Students can choose between two educational trajectories "Methods of food safety control" and "Food safety system".

Students of the scientific and pedagogical master's degree need to pass two types of professional practices: pedagogical and research.

Students of a profile direction need to take pass an industrial practice.

### **„Veterinary Food Safety and Technology (Bachelor)**

The study programme has a standard duration of 10 semesters (306 ECTS credits).

Graduates of the study programme acquire among others following skills: the use of fundamental natural sciences in professional activities and lifelong learning; application of legal norms in the food and veterinary safety, labour protection standards, the basic foundations of environmental, economic and anti-corruption culture and entrepreneurship, to understand the importance of the principles and culture of academic integrity; knowledge of the regulatory processes of the body's vital activity and their application in the study of profiling modules that determine the quality and safety of food products; apply theoretical and practical knowledge to solve educational and practical, professional tasks in the field of veterinary sanitation and food technologies and choose genres of academic writing; understanding of technological and technical features of food production based on mathematical concepts in food technology and food engineering; interpretation of laboratory analysis results based on theoretical knowledge of general, organic and food chemistry, food biotechnology, microbiology, food and biophysics; ability to compare the anatomical structure and physiology of healthy animals with pathological processes and pathomorphological changes, taking into account microbiological and virological studies; application of knowledge of pharmacology, toxicology, epizootology, parasitology and radiobiology to ensure food, biological, and radiation safety; the ability to distinguish between animals and birds by breed, class, level of feeding, technology of maintenance, taking into account hygienic and veterinary-sanitary standards, ensuring the welfare of animals etc.

Thus, graduates acquire competencies in matters of veterinary expertise, hygiene, quality assessment, and safety of the processing of food products of animal husbandry; poultry, fish farming and beekeeping; in modern branches of food processing industries and in the choice of innovative technologies that ensure the production of food products that are competitive on the world market; in the effective use of modern laboratory methods of analysis, devices and equipment in solving problematic issues in the field of veterinary and food safety.

Study programme consists of general education subjects cycle (56 ECTS credits), core subjects cycle (144 ECTS credits), major subjects cycle (94 ECTS credits) and a final assessment which includes writing and defending a thesis or preparing and passing a comprehensive exam (12 ECTS credits).

The CC and MS cycles include the UC and OC disciplines. The CC cycle includes the study of academic disciplines and the passage of professional practice and is at least 114 credits. The MS cycle includes academic disciplines and types of professional practices, the load of which is at least 60 credits of the total workload.

The CS and MS cycle includes following modules: “Natural science training”, “Regulatory processes of vital activity of an organism”, “Fundamentals of food production”, “Food engineering and quality management”, “Pathologic diagnostics and toxicological analysis”, “Veterinary and sanitary expertise”, “Advanced technologies in food production”, “Technical regulation and food safety” and “Research methodology and data analysis”.

Veterinary food safety and technology includes the following types of internship: educational, industrial, pre-graduate

## **2.2 Assessment**

### **General Assessment**

KazNARU carries out the scientific and educational process at the level of international standards in cooperation with the industry and ensures the competitiveness of graduates on the local and global labor market. KazNARU ensures the integration of education, science and production based on innovations in the agro-industrial complex, the mobility of students and teaching staff, creates new knowledge in the agricultural science of Kazakhstan and guarantees the creation of conditions for the development of human capital.

The university's policy is to train highly qualified specialists, meet the needs of students and employers, ensure the implementation of the principle of "Quality lifelong learning", conduct research, prepare recommendations for determining priority areas of technical, socio-economic and cultural development and implement their results in production. The policy is publicly available on the website. Experts were convinced that relevant internal and external stakeholders have been involved in the development and update of the policy.

The mechanisms that exist at KazNARU allow study programmes to demonstrate transparency, accessibility, openness, and involvement of all stakeholders in the implementation of the study programmes.

Students take an active part in the further development of study programmes. For example, at the meetings of the Academic Council of the faculty and the department, students can propose improvements to the educational process.

When forming the study programme, KazNARU strictly adheres to the Provisions on the educational program. All types of work related to the procedure and technology of study programme development are supervised by the head of the department, the departments of educational and methodological work of the Department of Academic Affairs. At the first stage of the study programme development, the goals and objectives and the results of the training of the study programme are determined. When formulating the goals and objectives, the main

provisions of the regulatory legal framework in the field of higher and postgraduate education of the RK are taken into account.

In order to implement study programmes, KazNARU annually develops academic calendar, catalog of elective disciplines, working curriculum, educational and methodological complex of the discipline.

The results of the training reflect the qualification levels and competencies of the graduate. The structure of the study programme is formed by various types of educational work, depending on the level of training (bachelor's degree, master's degree). In accordance with the state mandatory standard of education, each cycle of disciplines consists of a mandatory component and an elective component. The elective component of each cycle provides universities with the opportunity to independently determine the specialization of each programme, through the independent formation of the course of elective disciplines, taking into account the specifics of the socio-economic development of the state, as well as in accordance with the needs of the labor market of a particular region.

Every year, considering the requirements of consumers of educational services and external experts, changes are made to the list of the catalog of elective disciplines, to the database of declared teachers for mandatory and elective subjects.

Students have access to the Internet, to electronic educational resources developed by university teachers and posted on the educational portal.

When implementing the study programme, various criteria and evaluation methods are used, which allow an objective and fair analysis of the achieved learning outcomes, compare them with the expected learning outcomes, and make a management decision. In order to automate the educational process, as well as to support the educational process in the credit technology of training, KazNARU has installed an automated information system "Platonus". This system makes it possible to track all educational processes, such as the creation of academic calendars, the distribution of academic disciplines by teachers, the formation of individual curricula, the creation of cost-effective academic streams and testing.

The university has Rules for the development and design of educational programs, which reflect the main stages of the development and approval of the study programme, as well as the process of updating them.

The content of the study programme is established by the relevant state mandatory standards.

In order to form an active citizen position of students, the university has such public bodies as the Committee on Youth Affairs; the youth wing of the Zhas Otan party; the Student Council; the student trade union Committee; the debate club "Ziyaly Kazak", as well as students are

members of the Faculty Council and the Academic Council of the University. The Youth Affairs Committee, together with the Department of Educational Work, organizes debates, thematic meetings where students can express their opinions and exchange on topical and exciting issues.

All study programmes reflect well the four purposes of higher education of the Council of Europe (“preparation for sustainable employment, personal development, preparing students for active citizenship, and creating a broad advanced knowledge base and stimulating research and innovation”).

Since previous accreditation the level of internationalization has improved. For example, more courses are now taught in English language and students can also study in three languages (Kazakh, Russian and English). Two of the study programmes being accredited here are offered entirely in English. Nevertheless, in other study programmes the expert group would recommend to further improve English language skills of teachers and students. Expert group would suggest the university to further support internal and external mobility of the students, especially bachelor’s degree students, both in online as well as in off-line formats.

### **2.3 Conclusion**

The criterion is for all study programmes **fulfilled**.

Peer-review experts propose the following general recommendation:

- English skills of teachers and students should be further improved.

#### **„Veterinary Medicine“ (Bachelor)**

The study programme has a standard duration of study 10 semesters. After graduation, students should be able to undertake positions in the area of veterinary medicine. The graduates are qualified to diagnose, treat and prevent diseases of the animals. Moreover, graduates can identify reasons of mass epidemics or zoonoses. They can professionally use relevant medical-technical devices and devices.

In addition to subject specific knowledge, students are also able to acquire soft skills and improve their foreign language competencies.

Overall, students are well-prepared for the labour market.

The curriculum suits well the defined objectives. Students acquire practical skills through several mandatory internships as well as during practices at the university. Similar to other bachelor programmes, students study basic subjects that are mandatory to all students. Overall, all necessary subjects are covered through curriculum. Nevertheless, peer review experts would recommend integrating even more basic subjects such as anatomy, histology, embryology,

biochemistry and physiology into the curriculum. Currently, these subjects are only briefly covered in the curriculum, the hours dedicated to these subjects should however be substantially increased.

Since the last accreditation, the study programme has been further developed. Curriculum was adjusted and reviewed.

### **Conclusion**

The criterion is **fulfilled**.

The peer-review propose the following recommendation:

- Basic subjects such as anatomy, histology, embryology, biochemistry and physiology should be more integrated into the curriculum.

### **„Veterinary Medicine“ (Master)**

During the graduate studies students are able to broaden and deepen their knowledge gained during bachelor study. The aim of the programme is to train highly qualified specialists in the area of veterinary medicine. Students are also able to improve their English language skills. The programme prepares for PhD studies.

Programme objectives and learning outcomes of both scientific and pedagogical and profile directions are appropriate. Curriculum of both profiles is suitable to achieve the defined objectives. Nevertheless, experts would recommend to include more practical training in preclinical and clinical parts into the curriculum.

Similar to other master's degrees at KazNARU, all students have to take mandatory general subjects. Subject specific courses are appropriate. Students are able to specialize in five different specializations. The curriculum includes mandatory internships. Students have emphasized that teachers are very supportive in finding internship places. The faculty is well-connected with the relevant companies and organizations and thus are able to provide help if necessary.

### **Conclusion**

The criterion is **fulfilled**.

The peer-review experts propose the following recommendation:

- Curriculum should include more practical training in preclinical and clinical parts.

### **„Veterinary Sanitation“ (Bachelor)**

The study programme “Veterinary Sanitary” is subject to re-accreditation. In comparison to the last accreditation, the continuous improvement that was achieved over the last years is impressive. KazNARU considered all recommendations of the previous accreditation and developed even beyond this.

The new status as a National University adds to a higher visibility and the infrastructural improvements going along with this status cannot be overseen. With the general aim to prepare both competitive bachelor’s and master’s for the market, especially the national one, on the highest level, the overall strategy of the HEI is reflected in the study programme. The quality of the programme is improved continuously by inviting employers to take active part in the discussion and development of new modules. The process of developing and approving the programmes follows standardized specifications and is subject to a comprehensible quality management system. Not only are national and international experts involved in this process, but also graduates are asked to give feedback on points to improve.

The objectives and learning outcomes of the study programme are adapted to the needs of the market and the professional field in general. The skills a graduate should have after finishing the programs are starting points of the training contents. The outcomes fit to the expectations one can expect from undergraduates.

The career opportunities are well defined for graduates. Whether in national authorities, laboratories or in academia, due to the relatively low numbers of graduates and the broad education, the career opportunities are very good.

All requirements and expectations are well defined and transparently reflected. The HEI implemented a structured and continuous monitoring of the programmes, which is essential to reach the defined strategic goals. The study programme in “Veterinary Sanitary” is modernly oriented and one main objective, hygiene and disease prevention, is -in nowadays- even more important than it ever was before.

As particularly positive point, the relationship between research and learning has to be mentioned. It is impressive that newest research outcomes are directly included in the teaching objectives. This represents an extraordinary advantage of a National University compared to other ones.

Room for further improvement is in the still not well-defined internationality and in the offering of lectures in English.

### **Conclusion**

The criterion is **fulfilled**.

### **„Veterinary Sanitation“ (Master)**

The study programme “Veterinary Sanitary” is subject to re-accreditation. In comparison to the last accreditation, the continuous improvement that was achieved over the last years is impressive. KazNARU has implemented all recommendations expressed by the expert group and developed the programme even further.

The new status as National University adds to a higher visibility and the infrastructural improvements going along with this status cannot be overseen. External stakeholders including potential employers are invited to take active part the discussion and development of new modules. The process of developing and approving the programs follows standardized specifications and is subject to a comprehensible quality management system. Not only are national and international experts involved in this process, but also graduates are asked to give feedback on points to improve.

The objectives and learning outcomes of the study programmes are adapted to the needs of the market and the professional field in general. The skills a graduate should have after finishing the programs are starting points of the training contents. The outcomes fit to the expectations one can expect from Master graduates.

The career opportunities are well defined for graduates. Whether in national authorities, laboratories or in academia, due to the relatively low numbers of graduates and the broad education, the career opportunities are very good.

In the programmes, all requirements and expectations are well defined and transparently reflected. The curriculum is suitable to reach the defined objectives. The study programme in “Veterinary Sanitary” is modernly oriented and one main objective, hygiene and disease prevention, is -in nowadays- even more important than it ever was before.

As particularly positive point, the relationship between research and learning has to be mentioned. It is impressive that newest research outcomes are directly integrated into the teaching. This represents an extraordinary advantage of a National University compared to other ones.

Room for further improvement is in the still not well-defined internationality and in the offering of lectures in English.

### **Conclusion**

The criterion is **fulfilled**.

### **„Biotechnology“ (Bachelor)**

The objectives and learning outcomes of the study programme are clearly defined and appropriate. Students are adequately prepared for a further occupation in the field of biotechnology.

Study programme has developed since the last accreditation and content has been updated considering current state of the research and technology.

The curriculum of the study programme is suitable to achieve the defined objectives. General and subject-specific courses meaningfully build on each other.

The adaptation of laboratory equipment has increased in recent years, but also the number of students. Therefore, experts strongly encourage the university to critically check whether the current laboratory equipment is still sufficient for the execution of the practical courses or experimental work of the students.

The literature for the field of biotechnology is available primarily in English. Therefore, it would be beneficial if students submit more written work and present their laboratory work in English. Updating the level of knowledge after graduation will be possible (almost only) on the basis of English-language publications.

More lectures, e.g. in the basic subjects, should be held together with other study fields. This would reduce the teaching load and provide free time capacities for research or for supervising students' research work. Courses with the same content in different study programmes should be combined.

The aspect of molecular biology could be more strongly considered in the curriculum of the bachelor's programme.

Experts would suggest in the three study programmes "Biotechnology" (Bachelor/Master) and "Plant Science and Technology" (Bachelor) to consider if some of the fundamental or common subjects could be taught together in these programmes or with other study programmes. This way resources of the university can be more efficiently used, and the teaching load of the teachers could be reduced, thus enabling more time for a research.

Generally, the expert group got a good impression of the study programme. Teaching staff is engaged and dedicated. Students stressed during the interviews good support they receive from the teaching staff throughout their studies. Experts noticed major improvements since the last accreditation, which includes improvement of the curriculum, but also of the laboratories and further resources.

## **Conclusion**

The criterion is **fulfilled**.

The peer-review experts propose the following recommendation:

- Courses with the same content in different study programmes should be combined.

**„Biotechnology“ (Master)**

Students can choose between a profile direction (duration of study 2 or 3 semesters) and a scientific-pedagogical direction (duration of study 4 semesters). Learning outcomes in both directions are defined and appropriate. Students can choose between two trajectories which enables them further specialization depending on their interests. Curriculum corresponds to the master's level and students can deepen their knowledge in the field.

Individual modules are well-described and include all the necessary information. The structure and sequence of the modules is appropriate.

Students during the interview expressed their satisfaction with the study programme. Both students and teachers are highly motivated.

Similar to the bachelor's programme, experts would recommend to combine courses with the same content in different study programmes.

**Conclusion**

The criterion is **fulfilled**.

The peer-review experts propose the following recommendation:

- Courses with the same content in different study programmes should be combined.

**„Plant Science and Technology“ (Bachelor)**

The newly introduced study programme was developed in close cooperation with the Wageningen University, further cooperation and exchange of students and staff with the university is planned. The new study programme suits well into the strategy of the university. The university aims to improve its rankings and also align the study programmes to the universities in Europe.

The study programme seems to be well-developed, learning outcomes are clearly defined and appropriate. Curriculum corresponds to the current standards of the field of plant science and technology. In comparison to other study programmes at KazNARU, this bachelor's will be offered completely in English language.

The plans for a maximum capacity of 50 students are realistic. Experts would strongly suggest to quickly install the respective laboratory equipment or the outdoor as well as greenhouse areas or to complete the construction measures so that the current students can still use these facilities during their bachelor studies.

A possible study abroad (after the Corona pandemic) with an English-language component is already part of the curriculum, so there is no need for specific recommendations.

Similar to the “Biotechnology” (Bachelor/Master) study programmes, experts would recommend to combine courses with the same content in different study programmes.

## **Conclusion**

The criterion is **fulfilled**.

The peer-review experts propose the following recommendation:

- Courses with the same content in different study programmes should be combined.

## **„Food Safety“ (Master)**

Study programme “Food safety” is carried out in accordance with the mission of the university – training of highly qualified agricultural personnel of a new formation, who make a professional contribution to the development of food security in the country.

The study programme has well-defined and appropriate objectives and learning outcomes. Students are able to broaden and further deepen their knowledge gained during bachelor’s. As other master’s programmes, this programme is offered in two directions. Both directions and their curriculum are suitable to achieve the defined objectives.

The study programme contains following information: goals – the level of qualification, the degree awarded, recognition of previous training, the professional profile of the graduate; methods and methods of implementing the educational program; criteria for evaluating learning outcomes; key learning outcomes; the main modules.

The management of the study programme makes the maximum amount of effort to provide students with places of practice, promote the employment of graduates, and maintain contact with them.

The teaching staff of the department participates in the process of improving the study programme. The structure of the programme fully meets the requirements for graduates of educational programs to obtain a qualification.

Teachers of the department actively participate in the implementation of research, design and scientific-methodological works, in scientific conferences, as well as scientific publications of the teacher.

KazNARU has created the most favorable conditions for educational, scientific and extra-curricular time for students and teaching staff (Agrotechnological HUB, Kazakh-Japanese Innovation Center, Kazakh-Korean Innovation Center, educational and research laboratories for training specialists under the state program of industrial and innovative development, Situation Center).

The expert group would like to encourage KazNARU to further modernize the infrastructure for the implementation of study programmes using distance learning technologies, increase the number of its own virtual laboratory workshops, and develop joint educational programs with other universities.

## **Conclusion**

The criterion is **fulfilled**.

### **„Veterinary Food Safety and Technology (Bachelor)**

The study programme “Veterinary and Food Safety and Technology”, in general, fully meets the requirements of the mission of the KazNARU – to create conditions for the forming a competitive specialist, demanded in the agro-industrial complex and world science education activities, as well as for the development of a social-oriented, highly cultured and tolerant person.

Implementation of the study programme is carried out under the supervision of a branch of the Wageningen University in KazNARU (formation of the “Wageningen-Kazakhstan Institute”), established within the framework of the memorandum signed with the Wageningen University, at the Department of Veterinary and Sanitary Expertise and Hygiene of the Veterinary Faculty. The cooperation involves the teaching of some disciplines by specialists from the Wageningen University, possibility of the practical training of students in the Netherlands, as well as training of students in a partner university. Such collaboration will have a significant impact on the integration of this study programme into the international educational community. The 1st-year students started studying in September of the 2020-2021 academic year. Classes are conducted in English by the faculty of KazNARU and external teachers.

The study programme has been developed taking into account the feedback of commodity producers and employers in the field of production and sale of food products (enterprises for production and sale of food products, dairy, cheese, sausage factories, slaughterhouses other market players etc.). This segment of the labor market in Kazakhstan experiences acute need for specialists with competencies in both food production technology and veterinary and sanitary assessment of manufactured and finished food products. During the development of study programme, external stakeholders such as directors of the local companies were involved in the working group discussions.

The curriculum is interdisciplinary and multidisciplinary in nature. The elective components of each cycle provide students with the opportunity to independently determine their specialization. Elective disciplines are developed by the teaching staff taking into account the opinion of employers, the personnel potential of the study programme and the educational needs of the

student. Elective disciplines are discussed at the relevant department, presented by the teaching staff to students during the annual "Enrolment" procedure.

Based on the results of this procedure, students build their educational trajectory and form an individual curriculum, which allows them to acquire the expected competencies.

Graduates of the study programme have a broad prospect of employment in four areas: in the field of veterinary medicine as a veterinarian in food production, domestic trade facilities, veterinary laboratories, farms; a veterinary inspector of state institutions and the Customs Committee of the RK; in the field of standardization as a technical expert and a standardization specialist in conformity assessment bodies; in the field of food production as a technologist and master in enterprises that process animal products; in the field of education and science as a teacher in veterinary and technical educational institutions and a researcher in research institutions. Considering shortage of specialists at public and private enterprises in Kazakhstan and the planned English training and multi-vector specialization of the study programme, graduates have very good chances of finding a suitable job.

Practical training of students is provided by passing various types of mandatory professional practice. Study programme "Veterinary and Food Safety and Technology" includes the following types of training: educational, industrial, pre-graduate.

The Internship Program is developed by the Wageningen-Kazakhstan Institute and the Graduate Department together with the stakeholders and describes the complete internship process.

Educational practice is organized at the university during the period of theoretical training.

For the passage of industrial and pre-graduate training, contracts are concluded between the university and the profile organizations, which stipulate the conditions for providing students with social and living conditions, mechanisms for practical training and temporary employment in the specialty. If a student goes to practice in areas outside of their permanent residence, the KazNARU is paid travel expenses, including the cost of accommodation and travel.

Students can perform high-level scientific research at the modern material and technical base available at the department. According to the feedback of students interviewed, participation in scientific research is an attractive part of their education.

The disciplines "Parasitology and Invasive Diseases" and "Veterinary Pharmacology, Toxicology and Toxicological Analysis" (the 5th module of the curriculum) play an important role in the formation of a veterinary sanitation specialist. The university could reconsider and remove both disciplines from the optional components category and transfer them to the university component category.

## Conclusion

The criterion is **fulfilled**.

### 3 ESG Standard 1.3: Student-centred learning, teaching, and assessment

**Institutions should ensure that the programmes are delivered in a way that encourages students to take an active role in creating the learning process, and that the assessment of students reflects this approach**

#### 3.1 Implementation

Teaching staff apply various pedagogical and psychological and didactic tools and methods. They encourage students to take an active role in the learning process.

Following teaching methods are used in the bachelor's degree programmes: problem lecture, heuristic conversation, business game, discussion, case method.

Following teaching methods are applied in the master's degree programmes: lecture press conference, seminar on the materials of scientific research, project method, contextual learning, critical thinking.

Students are assigned a certain load for an independent work. The types of such work include mandatory elements (preparation for all types of classes, independent study of individual topics of the program, preparation for control events), which provide for the performance of various tasks (essays, presentation reports, scientific reports, creating videos, etc.), the list of which is determined by the tasks and content of the discipline.

To assess the educational achievements of students, the following types and forms of assessment are provided: current control, midterm control and final control. The level of the intra-university system for assessing the quality of students training is determined based on the system of internal monitoring of the quality of students' knowledge (internal control). This is based on the system of rating assessment of students' knowledge in the context of two midterm controls within the semester and the final semester exam, reflected in the examination sheets. The forms of control of knowledge of students are established and approved at the beginning of the academic year. For the organization of examination sessions, the teaching staff develop examination tickets, tests, or written assignments, which are approved at a meeting of the department.

The assessment of learning outcomes is carried out in accordance with the Dublin Descriptors, which describe five main results: knowledge and understanding, application of knowledge and understanding, formation of judgments, communication skills, learning skills or learning ability, which fully reflect the organization of student-centered learning.

The student has the right to appeal the results of intermediate and final control. In case of disagreement with the result of the final control, the student submits an appeal as well. An application for an appeal is submitted to the name of the dean of the faculty on the day of the exam or the announcement of the grade in the academic discipline. The application must state the specific reason for the appeal. The applicant submits students' applications for appeal personally. In the course of consideration of the appeal, only the correctness of the assessment of the results of passing the exam is checked.

### **3.2 Assessment**

The university implements varied methods of learning and teaching in the following study programmes. The experts got an impression that the students are also actively involved in this process and that their needs are taken into consideration. The methods of learning and teaching are clearly tailored towards achieving the defined learning outcomes. Teachers take use of a variety of pedagogical methods. During the pandemic situation, the faculty has rapidly adjusted to the new circumstances and to the online learning. The university management has also offered a support to the teaching staff in the development of new teaching technologies considering the pandemic situation.

The use and development of innovative teaching technologies of teaching staff is monitored through the program Rating of teaching staff, departments, faculties, and in the future by visiting classes by independent experts. For students of the university, it is provided in open access, where information about the activities of the university and for applicants is posted.

Experts note that master's degree students seem to be actively involved in the research and laboratory work of the teaching staff. Experts would suggest also involving bachelor students into research and laboratory work of the teaching staff, in order for them to get familiarized with research already in their bachelor studies. In this context, skills in statistical evaluation of the experiments could be taught to the Bachelor students. Such efforts could attract even more students for further research work during their Master or PhD studies.

Assessment methods are clearly communicated to the students in advance. The examination methods are mostly written and oral exams, which is also typical for the country. Assessment methods seem to be appropriate but could be more varied. Students receive continuous support from the teachers in preparing for exams. During the interviews, students stated that the regulations concerning the examinations are clear to them. Also, students confirmed that a formal procedure for student appeals is in place and is appropriate.

All documents relevant to the study programmes are (curriculum, catalogue of elective disciplines, educational methodological complexes of disciplines, syllabuses) available on the university information system "Platonus". The information is available to students, their parents

and to the teaching staff of the departments. Each participant has a personal account with a login and password for authorization. The disciplines content documentation with the indication of the teacher's e-mail and phone number are located in the "Platonus" system and the student can contact the teacher on-line.

### 3.3 Conclusion

The criterion is **fulfilled**.

Peer review experts propose the following general recommendation for Bachelor study programmes:

- Bachelor students should be more involved in the research and laboratory work. Students should acquire knowledge and skills in statistical evaluation of the experiments.

## 4 ESG Standard 1.4: Student admission, progression, recognition, and certification

**Institutions should consistently apply pre-defined and published regulations covering all phases of the student “life cycle”, e.g. student admission, progression, recognition and certification.**

### 4.1 Implementation

The procedure for admission to the study programme of each level of the university is determined by the Rules for admission to the University, approved by the Academic Council. The rules for admission of KazNARU are developed in accordance with the Standard rules for admission to training in educational organizations that implement educational programs of higher and postgraduate education (Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 No. 600, with amendments and additions dated 06/08/2020). All information about the rules of registration and admission to educational program at all levels is posted on the university website in the section “Applicants”.

In order to be admitted to the bachelor’s degree programme applicants need to take a Unified National Test (UNT) and score at least 60 points in the direction Agriculture including at least 5 points in the subjects History of Kazakhstan, Mathematical Literacy, Reading Literacy - the language of study, and at least 5 points in every major subject. UNT is organised and conducted by the Ministry of Education and Science of the RK.

Applicants to the master's programme pass a comprehensive test (CT), which includes a test in a foreign language (English, German, French, optional), a test on the major subjects depending on the study programme chosen. Comprehensive testing is carried out by the National Testing Center of the Ministry of Education and Science of the RK at the CT points determined by the Ministry of Education and Science of the RK.

The recognition process at KazNARU is regulated based on the principles of the Lissabon Convention and national regulations. The university cooperates with the national ENIC/NARIC Network which is an official responsible body for recognition process in Kazakhstan.

The automated information system “PLATONUS” contains all relevant educational documentation. Access to the “PLATONUS” system is available to all students, their parents and faculty of the department, who have personal accounts with login and password authorization. Content of the disciplines with the indication of the teacher's e-mail and phone number are available in the “PLATONUS” system. Student can contact the teacher on-line. The student can independently: look at and download the educational and methodological complex of disciplines (EMCD) of disciplines; track current, rating and final grades in their electronic journal; take online tests on disciplines during the intermediate certification; file an appeal on disciplines, view and download the transcript.

At the end of each examination session, the Registrar's Office submits a report that reflects the results of the students' academic achievements and professional practices, and the necessary actions are taken based on the results of the assessment.

Departments analyse the academic performance of students, assess the adequacy of the workload of disciplines, according to the results of which changes are introduced in the workload. The analysis of academic performance gives the level of effectiveness of the assessment procedures of students, and the department analyses the compliance of the forms of assessment of students with the results of teaching the discipline.

Upon graduation students are issued a diploma, transcript and if necessary, a Diploma Supplement.

## **4.2 Assessment**

The admission requirements at KazNARU are clearly defined and publicly available. Students can get a public grant or self-finance their studies. Approximately thirty percent of students self-finance their studies.

The university has a policy of forming a contingent of students from admission to graduation and ensures transparency of its procedures through the application of local regulations. The procedures governing the life cycle of students (from admission to completion) are defined, approved, and published.

The university regularly collects and monitors students 'progression which can be accessed via online platform “PLATONUS”. Recognition rules are provided and correspond to the national regulations.

Every year, at the beginning of the academic year, an assigned adviser introduces students to the curriculum for the academic year, the workload and the required number of credits to be achieved. The adviser helps students register for elective subjects, on the basis of which an individual curriculum is automatically compiled and adjusted.

The student through the online platform has access to courses offered, his or her current ratings and final grades, possibility to file an appeal etc.

To assess students' academic achievements, the quality of education during the academic semester after the intermediate control, as well as after each examination session, the report of the responsible academic performance – the deputy dean-is heard, quantitative and qualitative analysis is carried out, recommendations are made to advisors and curators. The analysis is carried out not only on the basis of examination sessions, but also by the results of the practices and internships.

The university provides graduates with documents confirming the received qualifications, including the achieved learning outcomes, as well as the context, content and status of the received education and the certificates of its completion, and the department carries out systematic monitoring of students' progress and employment of graduates. Diploma Supplement can be issued to the graduates.

### 4.3 Conclusion

The criterion is **fulfilled**.

## 5 ESG Standard 1.5: Teaching staff

**Institutions should assure themselves of the competence of their teachers. They should apply fair and transparent processes for the recruitment and development of the staff.**

### 5.1 Implementation

KazNARU has developed "Rules on the procedure for competitive replacement of positions of teaching staff and researchers" on the basis of the Labor Code of the Republic of Kazakhstan, the Law of the Republic of Kazakhstan "On Education" and the Charter of the University.

Positions of the teaching staff include dean, deputy dean, head of the department, professor, associate professor, senior lecturer, assistant (teacher).

The positions of the scientific staff of the university include director (of scientific directions), deputy director (of scientific directions), head (of a scientific laboratory, scientific centers), scientific secretary, leading researcher, senior researcher, researcher, junior researcher.

KazNARU announces a competition for the positions of teaching staff after the expiration of the employment contract, as well as for vacant positions. The competition for the vacant positions of teaching staff, as well as information about vacant positions, is announced through the media, determined in accordance with the established procedure, as well as the university's media (website, newspaper).

The competition for the positions of staff is conducted on the basis of an analytical summary of the results of the candidates' activities in the form of testing and / or interviews, while the knowledge is checked in accordance with the standard qualification characteristics for each position to determine the level of professionalism.

The implementation of the study programmes is provided by teaching staff who have an education corresponding to the profile of the discipline taught and are systematically engaged in scientific and (or) scientific and methodological activities.

Teachers of modules and disciplines of the profile cycle, as a rule, have an academic degree of candidate, Doctor of Science, Doctor of PhD and (or) experience in the relevant professional field.

KazNARU has a highly qualified teaching staff – 751 teachers, including 11 academicians of the National Academy of Sciences of the RK, 66 doctors of Science, 227 candidates of Science, 66 PhD, 240 masters of Science and 359 administrative staff.

Teachers continuously improve their knowledge and skills at seminars, courses, round tables, conferences. They take advanced training courses at universities and research centers in Kazakhstan, as well as abroad. Teachers have the opportunity to improve their skills by studying in the master's and doctoral programmes.

Every year, a plan for improving the teaching staff of the department is formed, monitoring the passage of advanced training courses by the Institute for Advanced Training of KazNARU is carried out.

## **5.2 Assessment**

“Rules on the procedure for competitive replacement of positions of teaching staff and researchers” implemented by KazNARU ensure transparent staff recruitment and development. Via the system of incentives, young researchers are motivated to improve their qualifications and skills. The HEI adequately support the scholarly activities of the teaching staff by offering a number of training possibilities (i.e. self-development of the teaching staff). Every year, a plan for development of the teaching staff is put into action, and the staff is encouraged to participate in trainings abroad.

Special emphasis is laid on the competitive recruitment of new staff members. Criteria for recruitment are clear and transparent. Applicants are assessed based on several criteria. The first criterion is research results that have already been achieved. In addition, a test lecture is completed and evaluated. The results are sent to the commission, which decides on the recruitment. In this way, the whole process is transparent.

Scholarly activities of the teaching staff are continuously supported and evaluated. Each teacher is examined annually by a committee. The examination is based on four points: the ranking of teachers (questionnaire that the teachers fill out themselves), the evaluation by the expert group (evaluation and attendance of the course), consideration of the results of student surveys and evaluation by colleagues. If the teacher has performed poorly in the evaluations, he/she has six months to correct the misalignment and is then re-evaluated.

The teaching staff is quantitatively and qualitatively sufficient to carry out the study programmes. Especially their identification with the KazNARU and their motivation to contribute to further improvement must be commended. The incentive system established at the university provides additional motivation to the teaching staff.

Further aspects that can be improved are the number of teaching staff fluent in English. The teachers should further acquire and improve their English skills in the upcoming years to ensure increasing internationality. Moreover, in the recruitment process, the scientific and research direction of the candidates should be ranked higher and basic research work should be stressed, in order to reach scientific journals with even higher impact. At the moment, the teaching staff focuses largely on applied research. The university should however improve its fundamental research in order to have more high impact journal publications.

### 5.3 Conclusion

The criterion is **fulfilled**.

Peer review experts propose the following general recommendation:

- The university should focus more on the fundamental research.

## 6 ESG Standard 1.6: Learning resources and student support

**Institutions should have appropriate funding for learning and teaching activities and ensure that adequate and readily accessible learning resources and student support are provided.**

### 6.1 Implementation

The university has created a modern material and technical base that meets the needs of the scientific and educational process and the implementation of innovative developments. There

is a well-developed network infrastructure, research and training laboratories, and an innovative greenhouse. Every year, funds are allocated for the renewal of the book fund, the purchase of equipment and furniture, computer equipment. The university regularly allocates funds for the renewal of the material-technical base at the expense of budgetary and extra-budgetary funds.

KazNARU has 45 buildings and structures with a total area of 116,931. 5 sq.m., comprising of academic buildings, student houses and auxiliary buildings. The university has 11 academic buildings, with a total area of 63,748. 8 sq.m. Ten student dormitories offer 3,766 places and eleven food cafeterias offer 572 seats.

The university has 32 computer classes and 64 classrooms with interactive equipment. The sports base consists of open and closed structures, with a total area of 11587 sq. m. There are 130 training laboratories, specialized classrooms, workshops with a total area of 7752.3 sq.m., equipped with all the necessary equipment and measuring tools for organizing and conducting laboratory and practical classes.

Each cohort group has an assigned curator. The curator of the student group is appointed from the teaching staff. The duties of the curator include among others: introduces students to the organization of the educational process at the university, the main intra-university documents, informs students about new orders, orders; promotes the adaptation of students to the system of higher education, promotes the involvement of students in research, cultural and mass sports and mass work; monitors the attendance of students in the group of academic classes, current and semester performance, analyses the reasons for the backlog of individual students and contributes to their elimination; plans educational activities, regularly maintains documentation, compiles and submits reports on its results, informs the head of the department and the dean's office about the situation in the academic group etc. Along with the curator, an adviser of the academic group in the first year is appointed, who supervises students throughout the entire period of study.

KazNARU has departments for providing educational and consulting assistance (educational, personal and academic issues) to students.

To promote academic mobility, the academic mobility coordinator and those responsible for academic mobility at the faculties are appointed. Academic mobility programs are handled by the Center for Academic Mobility and International Educational Programs.

In order to facilitate the employment of graduates, KazNARU has a Department of Practice and Employment. Together with the departments, graduates are offered various consultations and services. Every year, KazNARU holds a job fair "Zhas Orken", which allows graduates to

form their first idea of the labor market, the opportunities and prospects of their chosen profession, learn more about related fields, and potential employers.

## **6.2 Assessment**

KazNARU has sufficient and stable financial, technical and material base in order to successfully implement all study programmes being accredited. Learning resources are easily accessible and student support is sufficiently provided. Students during the interviews expressed their overall satisfaction with the resources and support provided.

The university has a good library fund which is continuously expanded. The proportion of literature in foreign languages in the main book library fund is 12.2%. Therefore, in order to optimize the educational process, the university should consider substantially increasing the proportion of foreign literature, especially in English language.

Access points to the Wi-Fi network are installed in the buildings and dormitories so that the teaching staff and students of the university can freely use the Internet and access all information portals.

The laboratories of the university are well equipped. Many new equipment was purchased since the last accreditation and technology was substantially updated. Experts assess the specific equipment for study programmes as good. The university follows national standards of laboratory security. The expert group would strongly recommend implementing international biosecurity standards in the laboratories. Considering that the university strives for cooperation with foreign universities and many graduates might pursue a career abroad, theoretical and practical knowledge of such standards is essential.

The university management strives to support gifted students. Gifted students have the right to apply for presidential and personal scholarships. For high achievements in educational, research, creative, sports or social activities, students can receive various benefits. Measures to support gifted students include providing successful students with discounts on tuition fees at the university in the amount of 20 to 50%; financing the expenses of students participating in international and national scientific and practical conferences, creative competitions, reviews, etc., awarding students who took part in the development of the best scientific project; holding competitions "Best Student of the Year", "KaznaruStars", "Best Student start-up Project". University provides a reduction in the cost of training for an underprivileged category of applicants.

KazNARU cooperates with other educational organizations in the framework of academic mobility programs. The university has a mechanism for recognizing the results of academic mobility of students, as well as the results of additional, formal and non-formal education.

The university provides an opportunity for external and internal mobility of students, as well as assists them in obtaining external grants.

### 6.3 Conclusion

The criterion is **fulfilled**.

The peer-review experts make following recommendation:

- International biosecurity standards should be implemented in all laboratories.

## 7 ESG Standard 1.7: Information management

**Institutions should ensure that they collect, analyse and use relevant information for the effective management of their programmes and other activities.**

### 7.1 Implementation

KazNARU uses the automated information system "Platonus" (AIS "Platonus") as a tool for collecting and analysing information intended for operational and strategic management of the university. Responsible persons have been identified at the university for timely data entry into the AIS "Platonus" and subsequent formation of reporting information.

The main information flows used to improve the quality of services provided, as well as to manage educational, educational, financial, etc. processes can be categorized into following groups: students, employees and general information about the university.

The Department of Academic Affairs is a key element in the collection and processing of information about the course of the educational process.

Management of information about the employment of graduates at the university is carried out by the Department of Practice and Employment.

### 7.2 Assessment

The assessment of the quality of the implementation of the study programmes is carried out within the framework of the general system of monitoring the quality of education, which consists in the assessment of the management of the study programme (the level of teaching staff, the organization of the educational process, regular assessment of the level of achievement of the program goals, the demand for graduates); the implementation of the programme (curriculum, methodological and information support, infrastructure, educational technologies, research); the results of the programme (intermediate certification, final certification). The evaluation mechanisms at the department are control visits to classes, sociological surveys of participants in the educational process, reviews of external practice managers, conclusions of the

chairmen of state certification commissions, reviewers of theses, as well as analysis of performance indicators, residual knowledge.

The survey of students is conducted on an ongoing basis in order to find out the quality of educational services, to identify the degree of satisfaction of students with the quality of the subjects taught (the quality of teaching lectures, seminars and laboratory classes, the quality of tasks and time to complete them, educational and methodological support) and to receive suggestions from students. The survey is conducted twice a year on the resource <http://survey.kaznaru.kz> in Kazakh, Russian, and English. The results are analysed at the meetings of the department and are discussed and considered.

Departments analyse the academic performance of students, assess the adequacy workload of disciplines, and if necessary, changes in the disciplines and to the workload are made. The analysis of academic performance also gives the level of effectiveness of the assessment procedures of students, and the department analyses the compliance of the forms of assessment of students with the results of teaching the discipline.

All proposals of students and other stakeholders are reflected in the reports of the extended meeting, the changes made are reflected in the study programme documents. Proposals concerning the work of support services are sent to the relevant structural divisions of the university.

The revision of the study programme consists in the development of the working curricula of the disciplines for each academic year, together with employers, taking into account their suggestions and comments.

Internal assessment of the quality of training is provided through monitoring, periodic evaluation and revision of the study programme at the meetings of the department, the Academic Council of the Faculty, the Methodological Council of the University and the Academic Council of the University.

External assessment of the quality of the study programmes is carried out through the final state certification of students, institutional accreditation of the university, as well as participation in the national ratings. Participation in national and international ratings and study programme ratings – allows to identify the strengths and weaknesses of activities and further work on improvement. The results of the accreditation and rating are available to all interested parties, published in the media and posted on the official website of KazNARU.

### **7.3 Conclusion**

The criterion is **fulfilled**.

## 8 ESG Standard 1.8: Public information

**Institutions should publish information about their activities, including programmes, which is clear, accurate, objective, up-to date and readily accessible.**

### 8.1 Implementation

Information about the activities of the university and the study programmes is available on the official website of the university. Information on study programmes such as curriculum, admission rules etc. is regularly posted on the university website and in the media.

The "Mass Media about us" page of the university website demonstrates the work of the university to inform the public about the activities of the university.

To inform the public, meetings are held with the target audience: employers, heads of industry enterprises, legal authorities, banks, field meetings were held with the heads of rural district education departments and school principals.

Public is informed about the activities of the university and individual study programmes through various social media including Facebook, Instagram etc..

### 8.2 Assessment

Information about the university and the study programmes is placed on the official website of KazNARU to all interested parties in three languages English, Kazakh and Russian.

The university publishes on its website audited financial statements, university strategy and quality policy, news, events, research activities, cooperations and information about the study programmes. The information presented is up-to-date and clear to all interested parties.

Every year, within the framework of career guidance work, the faculty of the department meets with students of the senior classes of secondary schools to disseminate information about study programmes, participate in city and national events, "Open Day" for applicants and "Job Fair". Direct communication with applicants and students of the university is carried out through social media accounts such as Instagram, Facebook, In Contact, tweeter.

The university places information and links to external resources based on the results of external evaluation procedures on its official website.

### 8.3 Conclusion

The criterion is **fulfilled**.

## 9 ESG Standard 1.9: On-going monitoring and periodic review of programmes

**Institutions should monitor and periodically review their programmes to ensure that they achieve the objectives set for them and respond to the needs of students and society. These reviews should lead to continuous improvement of the programme. Any action planned or taken as a result should be communicated to all those concerned.**

### 9.1 Implementation

The university has implemented a Quality Assurance Policy in 2015. To ensure the systematic management of the main and supporting processes of the university, a Quality Manual, documented procedures, responsibility matrices for QMS processes, and QMS instructions have been developed.

The development of strategic documents is carried out based on the results of the analysis of the external and internal environment, existing risks, compliance with resources, taking into account the needs of the labor market and the specifics of the educational services market. The study programmes are discussed at the meetings of the department, at the Academic Council of the Faculty and at the Academic Council of the University, taking into account the opinions and suggestions of employers and students. In order to ensure effective implementation and create a favorable learning environment, the Department monitors, evaluates and reviews the programmes. Every year, an extended meeting of the department is held to review the study programmes for relevance with the participation of all interested parties. The participation of students and graduates provides an opportunity to identify the needs of students, who may suggest new learning outcomes/competencies. The participation of employers at the meeting provides an opportunity to identify new competencies, expectations of the professional community, and update the content of existing courses/modules. The Training department monitors the quality of teaching, the favorable learning environment, etc. questions in the form of a permanent examination of classes.

To establish long-term, effective, mutually beneficial relations, the university has created a consortium, which includes more than 70 large enterprises and organizations of the agricultural sector of Kazakhstan. Round tables are held at the university to identify the level of satisfaction of employers with the quality of training of the graduates and to improve the programs of professional practices.

The survey of students is conducted at the university on an ongoing basis in order to find out the quality of educational services, to identify the degree of satisfaction of students with the quality of the subjects taught (the quality of teaching lectures, seminars and laboratory classes, the quality of tasks and time to complete them, educational and methodological support) and to receive suggestions from students in this area. The survey is conducted twice a year. In

addition, evaluation is included in reports at the department meetings, at the Faculty and University Academic Councils.

All the proposals of students and other stakeholders are reflected in the minutes of the extended meeting and undertaken changes are reflected.

Internal assessment of the quality of education is provided through monitoring, periodic evaluation and revision of the study programmes at the meetings of the department, the Academic Council of the Faculty, the Educational and Methodological Council of the University and the Academic Council of the University.

## **9.2 Assessment**

KazNARU regularly monitors its study programmes. The university has established a solid structure which includes all interested parties.

For elaboration of study programmes external stakeholders, students and teachers are involved in a didactic council holding a meeting once a year. For example, the study programme "Veterinary food safety and technology" (Bachelor) was developed because of special needs of Kazakh' labor market. Since being a national research university since October 2020, latest achievements of research and research projects should be integrated in curriculum and elective subjects as well. There is an open contest for teachers and students to suggest topics. The didactic council will decide if the topics are relevant and interesting.

In the study programmes "Veterinary medicine" (Bachelor and Master) the curriculum was reviewed. The University of Veterinary Medicine Hannover and Ecole Nationale Vétérinaire de Toulouse served as best practice template for that. Two study programmes "Plant science and technology" and "Veterinary food safety and technology" were created in cooperation with University Wageningen.

The quality of teaching, lectures and courses is controlled through different mechanisms of the departments. Every teacher is evaluated once a year. On the one hand through students' questioning twice a year, covering quality of teaching and objectivity in performance rating. On the other hand, an expert group of leading teachers of student administration as well as colleagues sit in on lectures and courses to evaluate teachers' performance. In these audits rating of teachers takes place, and the best gets additional financial compensation. When a teacher gets bad evaluation from students, they have six months to improve their performance.

Furthermore, there is an Institute for continuing education and means for qualification of teachers. In terms of academic mobility teachers should get the chance for research and work in foreign universities and countries for at least four weeks to continue their education. Likewise, teachers from other countries are invited for (online-) lectures and courses.

In a conversation with students of KazNARU expert group got an impression that the students are satisfied with their study programmes. Some suggested that more courses and lectures taught by foreign teachers would be beneficial. It also would be nice to organize academic mobility in student affairs more easily.

### 9.3 Conclusion

The criterion is **fulfilled**.

## 10 ESG Standard 1.10: Cyclical external quality assurance

**Institutions should undergo external quality assurance in line with the ESG on a cyclical basis**

### 10.1 Implementation

External quality assurance of the study programmes is mainly carried out through the final state certification of students, institutional and programme accreditations, as well as participation in the national and international university and study programme ratings. The results of the accreditation and ratings are available to all interested parties, published in the media and posted on websites.

KazNARU annually participates in the institutional and program ratings of national independent agencies such as Independent Agency for Quality Assurance in Education (IQAA), Independent Agency for Accreditation and Rating (IAAR), Republican Rating Agency (RRA) and National Chamber of Entrepreneurs “Atameken”.

The university passed institutional and programme accreditations with national and international accreditation agencies, which are registered in the national Kazakh Register and listed in EQAR.

### 10.2 Assessment

From the experts' point of view, it can be stated that KazNARU has a combination of internal and external quality management in order to offer its own degree programmes in accordance with the ESG.

All study programmes at KazNARU are accredited, either by national or international accreditation agencies. Moreover, the university passed an institutional accreditation. Representatives of the university have plausibly stated how the recommendations of the last accreditation were implemented. The experts are convinced that the faculty and university management consider the recommendations of the expert group.

The university fulfils all obligatory aspects of external quality assurance. Internal and external quality assurance measures take into account all legal requirements and benefit from each

other in order to constantly advance the development of the study programmes and the university as a whole. The results of the accreditations flow into the structuring of the KazNARU business processes. The university attaches particular importance to cooperation with external stakeholders such as partner universities, graduates, industry and employers in order to gain impulses for continuous internal quality development.

KazNARU's quality management ensures a permanent, up-to-date and transparent presentation of the general quality assurance measures and instruments.

### **10.3 Conclusion**

The criterion is **fulfilled**.

## **IV Recommendation to the Accreditation Commission of ACQUIN**

### **1 Assessment of compliance the Standards and Guidelines in the Higher European Area (ESG) in the actual official version**

The study programmes „Veterinary Medicine“ (Bachelor/Master), „Veterinary Sanitary“ (Bachelor/ Master), „Biotechnology“ (Bachelor/Master), „Plant Science and Technology“ (Bachelor), „Food Safety“ (Master) and „Veterinary Food Safety and Technology (Bachelor) were assessed on the basis of the "Standards and Guidelines for Quality Assurance in the European Higher Education Area" (ESG) and the national or other relevant regulations.

The expert group concludes that the **ESG standards** 1.1 (Policy for quality assurance), 1.2 (Design and approval of programmes), 1.3 (Student-centred learning, teaching and assessment), 1.4 (Student admission, progression, recognition and certification), 1.5 (Teaching staff), 1.6 (Learning resources and student support), 1.7 (Information management), 1.8 (Public information), 1.9 (On-going monitoring and periodic review of programmes) and 1.10 (Cyclical external quality assurance) are fulfilled.

**National criteria:** if applicable, national criteria are integrated in the ESG standards or listed separately.

The peer-review experts note that the recommendations from the previous accreditation procedure have been adequately taken into account.

### **2 Accreditation Recommendation**

The peer-review experts recommend unconditional accreditation of „Veterinary Medicine“ (Bachelor/Master), „Veterinary Sanitary“ (Bachelor/ Master), „Biotechnology“ (Bachelor/Master), „Plant Science and Technology“ (Bachelor), „Food Safety“ (Master) and „Veterinary Food Safety and Technology (Bachelor).

The peer-review experts recommend the following **recommendations**:

#### **General recommendations**

1. The university should focus more on the fundamental research.
2. International biosecurity standards should be implemented in all laboratories.
3. English skills of teachers and students should be further improved.

**Recommendation for study programme „Veterinary Medicine“ (Bachelor), „Veterinary Sanitation“ (Bachelor), „Biotechnology“ (Bachelor), „Plant Science and Technology“ (Bachelor), „Veterinary Food Safety and Technology“ (Bachelor)**

1. Bachelor students should be more involved in the research and laboratory work. Students should acquire knowledge and skills in statistical evaluation of the experiments.

**Recommendation for study programme „Biotechnology” (Bachelor/Master) and „Plant Science and Technology” (Bachelor)**

1. Courses with the same content in different study programmes should be combined.

**Recommendation for study programme „Veterinary Medicine“ (Bachelor)**

1. Basic subjects such as anatomy, histology, embryology, biochemistry and physiology should be more integrated into the curriculum.

**Recommendation for study programme „Veterinary Medicine“ (Master)**

1. Curriculum should include more practical training in preclinical and clinical parts.

## **V Decision of the Accreditation Commission of ACQUIN**

Based on the evaluation report of the peer group and the statement of the university the Accreditation Commission of ACQUIN decided on 27 September 2021:

General recommendations

- The university should focus more on the fundamental research.
- International biosecurity standards should be implemented in all laboratories.
- English skills of teachers and students should be further improved.

### **Veterinary Medicine (Bachelor)**

**The study programme „Veterinary Medicine” (Bachelor) is accredited without any conditions.**

**The accreditation is valid until 30 September 2028.**

The following recommendations are given for the further development of the study programme:

- Bachelor students should be more involved in the research and laboratory work. Students should acquire knowledge and skills in statistical evaluation of the experiments.
- Basic subjects such as anatomy, histology, embryology, biochemistry and physiology should be more integrated into the curriculum.

### **Veterinary Medicine (Master)**

**The study programme „Veterinary Medicine” (Master) is accredited without any conditions.**

**The accreditation is valid until 30 September 2028.**

The following recommendation is given for the further development of the study programme:

- Curriculum should include more practical training in preclinical and clinical parts.

### **Veterinary Sanitation (Bachelor)**

**The study programme “Veterinary Sanitation” (Bachelor) is accredited without any conditions.**

**The accreditation is valid until 30 September 2028.**

The following recommendation is given for the further development of the study programme:

- Bachelor students should be more involved in the research and laboratory work. Students should acquire knowledge and skills in statistical evaluation of the experiments.

### **Veterinary Sanitation (Master)**

**The study programme “Veterinary Sanitation” (Master) is accredited without any conditions.**

**The accreditation is valid until 30 September 2028.**

**Biotechnology (Bachelor)**

**The study programme “Biotechnology” (Bachelor) is accredited without any conditions.**

**The accreditation is valid until 30 September 2028.**

The following recommendation is given for the further development of the study programme:

- Bachelor students should be more involved in the research and laboratory work. Students should acquire knowledge and skills in statistical evaluation of the experiments.
- Courses with the same content in different study programmes should be combined.

**Biotechnology (Master)**

**The study programme “Biotechnology” (Master) is accredited without any conditions.**

**The accreditation is valid until 30 September 2028.**

The following recommendation is given for the further development of the study programme:

- Courses with the same content in different study programmes should be combined.

**Food Safety (Master)**

**The study programme “Food Safety” (Master) is accredited without any conditions.**

**The accreditation is valid until 30 September 2028.**

**Plant Science and Technology (Bachelor)**

**The study programme “Plant Science and Technology” (Bachelor) is accredited without any conditions.**

**The accreditation is valid until 30 September 2027.**

The following recommendations are given for the further development of the study programme:

- Bachelor students should be more involved in the research and laboratory work. Students should acquire knowledge and skills in statistical evaluation of the experiments.
- Courses with the same content in different study programmes should be combined.

**Veterinary Food Safety and Technology (Bachelor)**

**The study programme “Veterinary Food Safety and Technology” (Bachelor) is accredited without any conditions.**

**The accreditation is valid until 30 September 2027.**

The following recommendation is given for the further development of the study programme:

- Bachelor students should be more involved in the research and laboratory work. Students should acquire knowledge and skills in statistical evaluation of the experiments.