ASIIN Seal

Accreditation Report

Bachelor's Degree Programmes

Agronomy

Plant Protection and Quarantine

Technology of Storage and Processing of Agricultural Products

Provided by

Tashkent State Agrarian University

Version: 27 June 2025

Table of Content

A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
B 60810900 - Agronomiya	B 60810900 - Agronomy	ASIIN	State License HE NO. 5000056 dated December 30, 2022, State Inspectorate for Quality Control of Education	08
B 60811000 - O‘simliklar karantini va himoyasi	B 60811000 - Plant protection and quarantine	ASIIN	State License HE NO. 5000056 dated December 30, 2022, State Inspectorate for Quality Control of Education	08
B 60811300 - Qishloq xo‘jalik mahsulotlarini saqlash va qayta ishlash texnologiyasi (mahsulot turlari)	B 60811300 - Technology of storage and processing of agricultural products (by product types)	ASIIN	State License HE NO. 5000056 dated December 30, 2022, State Inspectorate for Quality Control of Education	08
Date of the contract: 08.08.2024 **Submission of the final version of the self-assessment report:** 16.04.2025 **Date of the onsite visit:** 06.-07.05.2025 **at: Campus Tashkent State Agrarian University**				
Expert panel: Prof. Dr. Alexander Stoy, Kiel University of Applied Sciences Dr. Daniela Schwarz, University of Kassel				

[1] ASIIN Seal for degree programmes

[2] TC: Technical Committee for the following subject areas: TC 08 – Agriculture, Forestry, and Food Sciences

Dr. Zafar Bakhodirov, Tashkent Institute of Soil Science and Agrochemical Research Romes Istamov, student at Tashkent Institute of Irrigation and Agricultural Mechanisation	
Representative of the ASIIN headquarter: Johann Jakob Winter, M.Sc.	
Responsible decision-making committee: Accreditation Commission for Degree Programmes	
Criteria used: European Standards and Guidelines as of May 15, 2015 ASIIN General Criteria, as of March 28, 2023 Subject-Specific Criteria of Technical Committee 08 – Agriculture, Forestry, Food Sciences, and Landscape Architecture as of March 27, 2015	

B Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF[3]	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
B 60810900 - Agronomy	Agronom, agronom-nazoratchi (UZB) Agronom, Agronomist-controller (ENG)	-	6	Full-time	-	4 years / 8 semesters	240 ECTS credits	annually since 1999
B 60811000 - Plant protection and quarantine	O‘simliklarni himoya qilish sohasida agronom, entomolog, fitopatolog, (UZB) Agronomist, entomologist, phytopathologist in the field of plant protection (ENG)	-	6	Full-time	-	4 years / 8 semesters	240 ECTS credits	annually since 1999
B 60811300 - Technology of storage and processing of agricultural products (by product types)	Qishloq xo‘jaligi mahsulotlarini saqlash va qayta ishlash texnologi (UZB) Technologist of storage and processing of agricultural products (ENG)	-	6	Full-time	-	4 years / 8 semesters	240 ECTS credits	annually since 1999

Tashkent State Agrarian University (TSAU, Uzbek: Toshkent Davlat Agrar Universiteti) is a public university in Uzbekistan´s capital city Tashkent, founded in 1930. Currently, the university consists of 8 faculties and 25 departments that offer education in 30 areas of study. The current number of enrolled students is roughly 16,000. About 21,500 students are enrolled at the university. In national rankings, it is listed among the top 15 universities in the country. According to the university representatives, TSAU is Uzbekistan´s leading agrarian university and therefore of crucial importance for the country, whose agricultural sector is still a driving force for the national economy.

A particular feature of TSAU is its widespread national network of industrial stakeholders which is closely involved in the strategic development of study programmes at the university, the content-wise orientation of individual programmes and modules, the determination of the demand for specialists and therefore the admission numbers, as well as in the teaching activities themselves by means of site visits, multiple internships, and guest

[3] EQF = The European Qualifications Framework for lifelong learning

lectures. As a result, all three programmes offer a specialised, application-oriented education which allows students to start working in their respective work positions already during their studies or directly after graduation. In that regard the experts note that the general competencies of the students should be enhanced to allow them a broader perspective going beyond their specialisation. This includes also the topics of research, foreign language competency, and international experience. Furthermore, many aspects of the university´s documentation are identified as points for necessary improvement.

For the Bachelor's degree programme Agronomy (BaAG) the institution has presented the following profile in the Self-Assessment Report and on the programme´s website:

"The aim is to prepare specialists in the agricultural sector who are proficient in modern methods of land resources and agricultural technologies. Graduates of the Agronomy (by types of agricultural products) program can work professionally in various sectors of agriculture, in agricultural departments and managements, in agroclusters and farms, and in related production sectors." "The main area of activity of the department is the study and introduction of modern technologies for the cultivation of agricultural crops, increasing soil fertility, rational use of land resources and the development of environmentally friendly farming systems."

For the Bachelor's degree programme Plant Quarantine and Protection (BaPQP) the institution has presented the following profile in the Self-Assessment Report and on the programme´s website:

"BaPQP is a specialized educational institution that prepares specialists who are well-versed in obtaining biologically pure products and combating quarantine and non-quarantine harmful organisms found in plants using modern and innovative methods. It operates in the departments of the Plant Quarantine and Protection Agency under the Ministry of Agriculture of the Republic of Uzbekistan." "The educational process is based on core disciplines such as phytopathology, entomology, plant quarantine, protection product technologies, integrated pest management, agroecology, and diagnostics. Practical training is conducted in quarantine laboratories, field experimental stations, phytosanitary services, and research institutes. The main department responsible for training specialists in this field is the Department of Plant Protection and Quarantine."

For the Bachelor's degree programme Technology of storage and processing of agriculture products (BaTSPAP) the institution has presented the following profile in the Self-Assessment Report and on the programme´s website:

"BaTSPAP prepares specialists in the field of storage and processing of agricultural products. They work in enterprises and organizations that produce, prepare, and export food

products. Educational directions must have both professional and personal competencies. Personal competencies include followings: responsibility, the ability of self-development and study, communication and social skills, working in a team, and the ability to make decisions in the condition of uncertainty." "Students will acquire theoretical and practical knowledge in product quality control, packaging, logistics organization, and the rational use of technical tools in their professional activities."

All three programmes are subject to international accreditation by ASIIN for the first time.

C Expert Report for the ASIIN Seal

1. The Degree Programme: Concept, Content & Implementation

Criterion 1.1 Objectives and Learning Outcomes of a Degree Programme (Intended Qualifications Profile)

Evidence:

- Self-Assessment Report
- Curriculum review documents of all study programmes
- Study plans of all study programmes
- Objective-module matrices of all study programmes
- Module descriptions of all study programmes
- Ministerial regulation "State Educational Standard of higher education. Basic rules “on approval of the state standard of the Republic of Uzbekistan”
- Websites of all study programmes
- BaAG: https://tdau.uz/en/bachelor-students/agronomy/
    - BaPQP: https://tdau.uz/en/bachelor-students/plant-protection-and-quarantine/
    - BaTSPAP: https://tdau.uz/en/bachelor-students/technology-of-storage-and-processing-of-agricultural-products-bachelors-degree-program/
- Discussion during the audit

Preliminary assessment and analysis of the experts:
The experts base their assessment of the learning outcomes on the information provided on the websites, the objective-module-matrices and in the Self-Assessment Report of the three degree programmes under review. The experts refer to the Subject-Specific Criteria (SSC) of the Technical Committee 08 – Agriculture, Forestry, and Food Sciences as a basis for judging whether the intended competence profiles of the three programmes correspond with the competences as outlined by the SSCs. The PLOs of all programmes are displayed in the appendix.

The employment of graduates of the programmes is constantly monitored by the university´s Career Center and the Department for Organizing Student Practices. Their results

show that the employment opportunities are generally good with about 90% of the graduates of the past four cohorts being employed. Moreover, the results also show that the majority of graduates is employed in a job related to the specific subject of study, as displayed in the following table taken from the Self-Assessment Report:

Graduation year	Total number of graduates	Employed	Employment, %	Employment, %	
				According to specialty, %	Not by specialty, %
Agronomy					
2021	157	142	90.4%	89-62.7%	53-37.3%
2022	59	54	91.5%	35-64.8%	19-35.2%
2023	63	58	92.0%	38-65.5%	20-35.5%
2024	61	58	95.0%	45-77.6%	13-22.4%
Plant quarantine and protection					
2021	125	118	94.4%	87-73.7%	31-26.3%
2022	71	65	91.5%	51-78.5%	14-21.5%
2023	110	102	92.7%	78-76.5%	24-23.5%
2024	88	81	92.0%	69-85.2%	12-14.8%
Technology of storage and processing of agricultural products					
2021	103	93	90.3%	69-74.2%	24-25.8%
2022	48	42	87.5%	34-81.1%	8-18.9%
2023	50	46	92%	32-69.6%	14-30.4%
2024	58	53	91.4%	39-73.6%	14-26.4%

According to the Self-Assessment Report, TSAU develops the PLOs through a working group involving different stakeholders to review and assure their relevance for the labour market and society. The task of monitoring their attainment and administrating the review processes lies with the Department of Quality Assurance. During the on-site visit the programme coordinators explain that the close involvement of representatives of related industrial companies as well as research institutes is the input factor for the development of the learning outcomes and the curricula of all three programmes. Moreover, they learn that the learning outcomes of BaPQP and BaTSPAP and curricula target specific job profiles to educate “modern specialists” in the respective fields according to the industrial needs. For the BaAG, the learning objectives are formulated more broadly, enabling graduates to take over various roles in the agricultural industry. The main job profile of BaAG graduates are agriclusters and regional departments, while the focus of the more specialised BaPQP is on plant quarantine agencies. BaTSPAP incorporates a larger technological component, and graduates therefore mainly work as technologists for warehouses and processing enterprises in the food industry. Moreover, entrepreneurship is named to be a common application of graduates, which is among others supported by an entrepreneurship centre of the university and various extracurricular activities to foster the innovation of agricultural products (see also section 3.2).

While the experts positively acknowledge the close relation between the university and the industries and that the students are easily able to find jobs after graduation or even already during their studies, they point out that the competencies of "modern specialists" need to go further than the subject-specific knowledge, understanding, and practical skills, which are described in the learning outcomes. This regards the competency to comprehend the own working environment and the understanding of the role of the respective specialists within this system. In this regard, the experts point towards the subject-specific criteria of the Technical Committee 08 which explicitly outline also the need for research and skills and social competences. Based on the discussions, the experts figure that the curriculum partly enables the attainment of these skills (see also section 1.3) but do not find them in the learning outcomes. Thus, they see the need to widen the scope of the learning outcomes in that regard.

Moreover, as a general observation, the experts point out that the learning outcomes are not formulated in an outcome-based way. The formulation of learning outcomes should meet the following key characteristics:

- Measurable: They should be expressed in a way that allows for assessment of student learning.
- Observable: They should describe what students can do or demonstrate, rather than just know.
- Specific: They should clearly articulate what students are expected to learn.
- Achievable: They should be realistic and attainable within the context of the learning experience.
- Relevant: They should connect to the broader goals and purposes of the course or program.
- Student-centred: They should focus on what the student will be able to do, rather than what the instructor will do.

Also, the number and level of detail of the learning outcomes appear to capture the learning outcomes more independently on the level of separate modules instead of a broader integrated level of what students should be able to demonstrate at the end of the programme. Therefore, the experts require TSAU to rework the learning outcomes both in terms of content as well as formulation to address the described shortcomings. Lastly, the experts criticise the current lack of transparency regarding the learning outcomes as they are neither published on the programmes´ websites, nor displayed on the Diploma Supplements as the crucial document to show the students´ obtained qualifications. As the learning outcomes need to be transparently available to all interested parties, the experts require TSAU to address these faults.

In summary, the experts confirm that the objectives and learning outcomes of all three programmes are feasible to produce graduates with good job prospects, as close stakeholder relations and an extensive review process ensure their relevance for both the labour market and society. However, they see the need to broaden the scope of the learning outcomes concerning research and social competencies to fully capture the extent of a Bachelor´s degree on level 6 of the EQF. Moreover, the formulation of the learning outcomes needs to be reviewed and adapted to reflect the modern standard characteristics for formulating learning outcomes in higher education. Lastly, it is required to publish the learning outcomes on the respective programmes´ websites, and also clearly display them in the Diploma Supplements.

Criterion 1.2 Name of the Degree Programme

Evidence:

- Self-Assessment Report
- Websites of all study programmes
- Examples of Diploma Supplements
- Examples of Diploma Certificates

Preliminary assessment and analysis of the experts:
As the representatives of the Rector´s office explain, the programmes´ names were chosen in accordance with the State Standard of the Republic of Uzbekistan for titles of study programmes. According to the Diploma Supplements, TSAU awards the degree of “Bachelor” for all programmes under review. Furthermore, graduates are allowed to use the following titles upon completion of the programmes:

- BaAG: Agronomist, Agronomist-controller
- BaPQP: Agronomist, entomologist, phytopathologist in the field of plant protection
- BaTSPAP: Technologist of storage and processing of agricultural products

During the on-site visit, the experts are wondering and discuss about the meaning of the name appendices “(by types of agricultural products)” of the BaAG programme and “(by product types)” of the BaTSPAP programme. TSAU explains that this is part of the current state classification system for study programmes and refers to the specialization for different products respectively industry branches the students can obtain in the programmes. However, the programmes of TSAU do not focus only on one certain type of product as apparently other programmes in Uzbekistan do, meaning that the appendix in brackets is not specified. Therefore, looking at the Diploma Supplements and Diploma Certificates, the

experts do not see any informative value in these appendices and, on the contrary, comment that this amendment of the titles in brackets is rather confusing from an international perspective. Also, even if industry- or branch-specific elective specialisations were to be introduced in the curricula, they do not deem it a sensible option to amend the programme titles in that way. Eventually chosen specialisations could nevertheless be clearly outlined to potential interested parties in the Diploma Supplements. In that regard, the programme coordinators explain that a new ministerial regulation with respect to this naming classification is expected to be issued in the next year which cancels the need for this additional specification of the programme names. If the ministerial regulations allow, the experts therefore suggest to use only the short versions of the titles which they deem to be sufficiently specific to the respective programmes.

Besides that, the experts notice that the exemplary Diploma Certificate and Diploma Supplement for the BaPQP programme display the programme name “Plant protection (by crop type)” instead of “Plant Quarantine and Protection” as outlined, e.g., in the Self-Assessment Report and the module handbook. Therefore, the experts ask for clarification and require TSAU to use the programme title consistently in all official documents.

In summary, the experts confirm that the programme titles in both their original name and English translation adequately reflect the learning outcomes and curricular contents of the programmes. However, the name of the BaPQP programme needs to be clarified and used consistently.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- Curricular overviews of all study programmes
- Module descriptions of all study programmes
- Objective-module matrices of all study programmes
- Exemplary study schedule
- Organisational outlines of the part-time version of all programmes
- Programme on the graduation internship of the BaAG programme
- Ministerial regulation “on measures to improve the system related to the organization of the educational process in higher education institutions”
- Discussion during the audit

Preliminary assessment and analysis of the experts:

Structure and content

The experts base their assessment of the curricula on the curricular structures, as displayed in the appendix below, the module handbooks, as well as further supporting documentation as given in the Self-Assessment Report.

All three programmes have a duration of four years (8 semesters) and a credit load of 240 ECTS credits. Each semester lasts 15 weeks and contains a designated workload of 15 credits. The overall structure of the programmes is the same and includes compulsory modules (176 ECTS), elective modules (38 ECTS), professional qualification practices (internships, 22 ECTS) and the final state attestation. Besides the subject-specific compulsory modules, all programmes contain the national compulsory modules "The newest history of Uzbekistan", "Physical culture and sport" and "Religious studies", as well as multiple modules in "Uzbek/ Russian language" and "Foreign (English) language". These national compulsory modules are mainly contained in the first two semesters of all programmes. Moreover, in all programmes, each academic year contains at least one internship ("practice") module (see section 1.6). The curricula of all three programmes are outlined in the appendix.

Core elements of the BaAG programme are "Botany and plant physiology" as well as the "Introduction to agriculture" and "Biology" in the first year of study, "Agricultural biotechnology and microbiology", "Soil science and agrochemistry", "Farming" and "Reclamation and land development" in the second year of study, while the third year focuses on "forage cultivation", "Plant protection", and "Cotton science". The final year of study contains "Plant science" as the main compulsory component, as well as multiple elective slots, and the final state attestation. Overall, there are seven slots for elective modules spread over the curriculum, with two to three choice options each. According to the Self-Assessment Report, laboratory work is included for the following subjects: "Analytical, physicocolloid and bioorganic chemistry", "Botany and plant physiology", "Soil science and agrochemistry", "General phytopathology and microbiology", "Farming", and "Reclamation and land development".

With respect to the curricular structure the experts discuss the designated order of the modules in the programme. As an example they question why "Plant science", which the experts deem to be a fundamental basic subject, is contained only in the final study year, while modules like "Plant protection" and "Fruit and vegetable growing", which build on the basic knowledge of plant science start already in the third semester. The programme coordinators explain that the module "Plant science" is actually an advanced module in which contemporary and forward-looking issues are taught. The experts deem this comprehensible but point out that this is not adequately reflected in the module descriptions.

Moreover, they also wonder about the general topics like economics, social sciences, and business administration including e.g. finance, taxation, and accounting which the experts deem highly important for agronomists in today´s national and international agricultural industries and markets. However, besides the compulsory module "Information and communication technologies in agriculture" and two elective option in the eighth semester, the experts do not find these topics included in the curriculum. Even though specialists are trained for this purpose in other study programmes at TSAU, experts believe that basic knowledge is essential for agronomists and existing elective modules in that regard could, e.g., be made compulsory. In this regard, the programme coordinators explain that these more general topics are taught as part of other modules. In general, the experts deem this a plausible option and also acknowledge the comments of the industry representatives who highlight both the subject-specific skills as well as soft-skills like persistency, adaptability, and meticulosity of the programmes´ students and graduates. However, the experts do not find this in the learning outcomes and content outlines of the module descriptions. A general review and specification of the module descriptions is therefore required (see also section 4.1). Moreover, even if these topics are included in other modules, the experts would deem it highly useful to increase the focus on these topics, given the current developments in the field. Therefore, they highly recommend strengthening general competencies in the curriculum, e.g. economics, business administration, and social sciences. This recommendation concerns BaAG in particular but is issued generally and includes also the two other programmes.

The curriculum of the BaPQP programme contains similar modules as the BaAG mainly in the first two years of study and, as the programme coordinators explain, students of both programmes are taught together in one group. As one difference, the focus of the second year of study is on "General phytopathology and microbiology" instead of "Farming". In the third and fourth semester, the main modules in the curriculum are "Quarantine pests and diseases of plants", "Fruit and vegetable growing", "Phytosanitary control and diagnostics in plant quarantine", as well as "Mycology" and "Weed control measures". Large module blocks in the final semester are "Agricultural entomology", "Agricultural phytopathology", and "Standardization and certification of agricultural products". According to the Self-Assessment Report, laboratory work is conducted for the following subjects: "Analytical, physicocolloid and bioorganic chemistry", "Botany and plant physiology", "Soil science and agrochemistry", "General phytopathology and microbiology", "Chemical lant protection and agrotoxicology", "Agricultural entomology", and "Agricultural phytopathology". In summary, the experts are satisfied with the curriculum of this programme and confirm that the learning outcomes of the modules can be achieved and enable students to become qualified specialists in the field of quarantine and plant protection.

The fundamentals of the BaTSPAP programme are “Botany and plant physiology”, “Farming and plant science”, as well as “Fruit and vegetable growing” which represent the agricultural part of the programme. For the technical component of the programme, there are the modules “Fundamentals of electrical engineering and digitalization” and “Engineering and computer graphics”, which are contained in the first two study years. The second half of the programme integrates both components with modules like “Standardization and certification of agricultural products”, “Warehouses for storage of agricultural products”, “Equipment and design principles of agricultural product processing enterprises”, and “Packaging of agricultural products”. Furthermore, specialized modules deal individually with the technology and storage of different agriculture products, including fruit and vegetables, meat and dairy, and grains. Furthermore, three more elective slots offer the opportunity to specialise further in the agricultural or technical component of the programme. According to the Self-Assessment Report, laboratory work is conducted for the following subjects: “Analytical, physicocolloid and bioorganic chemistry”, “Botany and plant physiology”, “Heat engineering and heat use in agriculture”, “Mechanization of storage and processing of agricultural products”, “Electrical engineering”, and “Basics of digitalization”. The experts are satisfied with the subject-specific structure and contents of this programme and confirm that the learning outcomes of the modules enable that the learning outcomes can be achieved and that the programme can be completed within the standard period of study.

In terms of the curricular contents of all three programmes, the experts are happy to see that they contain a foreign language module. However, the experts wonder about the name displayed in the module handbook which is “Foreign language”. Therefore, the experts enquire which foreign language is actually taught in this module or whether multiple foreign languages are supposed to be learnt by the students. The programme coordinators explain that the predominantly offered language is English, but that there is also the option to choose German as foreign language. Further foreign languages are offered to the students in extracurricular courses. The experts positively acknowledge this language offer but opine that the focus should be on teaching the English language as the predominant language used in both international business and academia. Also, the experts point again towards the problem of the untransparent module names. Each offered foreign language module needs to have a subject- and therefore language-specific module description including a singular module number and title that identifies the module.

Moreover, the experts discuss the integration of the internships into the curricula of all three programmes, which were described as follows in the Self-Assessment Report:

- BaA: “during the 4 year of the program, students gain an introduction to the plant world (botany) in the 1st year, learn about medicinal and cultivated plants, and practice preparing herbariums. In the 2nd year, students identify the types and varieties of crop rotations. Participate in the cultivation of cultivated crops and, based on the collected data, draw up a map of the contamination of crop rotation fields with weeds. In the 3rd year, a student who has undergone a practice in production participates in the agrotechnics of crops grown on the farm. The student learns to maintain farm documentation. In the 4th year, during the pre-graduate practice in a specialized organization, the student completes a graduation qualification work and presents it in the form of a report on the pre-graduate practice.“
- BaPQP: “during the 4th year of the qualification practice, in the 1st year, students get acquainted with the lifestyle of some insect species in natural and artificial conditions on farms where the practice is conducted in order to arouse interest in these directions of education and strengthen their theoretical knowledge. In the 2nd year, they get acquainted with insect pests that harm agriculture. They learn the distribution and systematics of harmful and beneficial insects in the insect world, as well as the processes and methods for conducting scientific research on them and identifying their species. In the 3rd year, they gain skills in a comprehensive in-depth study of insects and diseases that harm agricultural crops and, on this basis, measures to combat them. In the 4th year, during the pre-diploma practice in a specialized organization, the students complete the graduation qualification work and present it in the form of a report on the pre-graduation practice.”
- BaTSPAP: “In the 1st year, students learn to understand and analyze the technical characteristics of technological equipment used in enterprises of storage of agricultural products and processing. In the 2nd year, they acquire the skills to understand the processes, stages of product production, the characteristics of production workshops, and calculate the main parameters. In the 3rd year, they acquire the skills to perform certain operations in the production of products, use equipment, and manage modern storage warehouses. In the 4th year, during the pre-graduate practice in specialized organizations, the student completes the graduation qualification work and presents it in the form of a report on the pre-graduate practice.”

However, these so-called internships are not documented in the module handbooks and are also not distinguished in the curricular overviews. The programme coordinators explain in that regard that there are four kinds of internships:

1. The 2-week “introductory internship” in the second semester in which students are mainly supposed to get to know the practical environment in companies related to their study field. This also explains the experts´ question why the students only

observe or do very basic things like preparing herbariums as an example of the BaAG programme. Although this is called “internship”, the experts deduct from the explanations that the learning activities of this module are mainly conducted at the university.

2. The 4-week “pedagogical internship” in the fourth semester, during which students shall get acquainted with more subject-specific practical activities. This is usually also done at the university itself.
3. The 8-week “production internship” in June and July, after the end of the teaching activities and exams of the sixth semester. As the industry representatives explain, this internship is the first time the students are actively involved in hands-on activities of their internship hosts.
4. The 8-week “graduation internship” in the beginning seventh semester, as outlined in the comprehensive “graduate work” document, is designed as research internship for students to study literature, conduct practical experimental analyses, and, after conclusion of the practical activities, write and defend a graduate report about the respective activities. In relevant ministries and agencies, enterprises, research institutes, specialized departments, information resource centres and other economic entities.

The programme coordinators explain that TSAU has a pool of partner institutions and companies that offer these different structured internships for students. For each internship stage, the students can apply for their preferred internship place. The content of the internships is developed by the respective internship partners in collaboration with the university and documented in respective internship plans, as the industry representatives explain. The assessment of the internships is based on the internship diaries of the students. The students state that they are satisfied with the structure of the internships and affirm that they allow them a good transfer of the theoretical knowledge into practice. Based on the explanations of all involved parties, the experts highlight the integration of practical experience in for multiple internships as one of the strengths of all programmes under review. However, as internships are also modules within the curriculum, they have to be documented accordingly.

As another general observation, the experts note that several modules are spread over two semesters. While in the curricular overviews, these modules are displayed as separate modules, the module handbooks contain only one comprehensive description for these modules with the aggregate credit load of all partial modules and the information, that the teaching is spread over multiple semesters. While the experts deem that this generally complies with the required modular structure of the programmes, they point out that a modern curriculum design should enable more flexibility by designing modules with a

limited pre-determined set of contents that can be completed within one semester. In addition, modules taking more than one semester preclude any opportunity of an international academic mobility. In this regard, they suggest splitting up the existing larger modules into two consecutive modules, each with a differentiated name and specific content outline, which needs to be briefly and precisely documented in the respective module description. The use of generic module names like “Plant science” which contain only little informative value in themselves should be avoided. Instead, the module names should reflect the specific set of teaching contents as precisely as possible. As examples for a part of this module, the experts suggest the differentiated modules “Soil Science” and “Agrochemistry” instead of the common module TPAK1308, and “Phytopathology” and “Microbiology” instead of the common module UFTMKB2310.

Related to this matter of interlinked modules, the experts also learn during the audit that the curriculum prescribes a fixed order in which the modules have to be taken and completed. According to the programme coordinators, there are strict ministerial regulations regarding this structure. While the experts assess this very regulated, school-like system as generally feasible, they explain that a more flexible approach which allows students the responsibility to take the modules in an order of their choice would benefit the students´ individual analysis of the curricular contents. Overall, however, the experts deem the curricular structure as adequate to fulfil the programmes´ learning outcomes, which is also confirmed by the industry representatives and students.

As a last question regarding the curricular structures, the experts inquire about the offered part-time study option, which is only briefly mentioned in the Self-Assessment Report. The programme coordinators explain that, in this case, the study load is reduced to 24 ECTS per semester, and that certain modules are postponed accordingly. The overall structure and order of the modules is said to be not affected. While the experts deem a part-time study offer suitable for students who have to accommodate other personal or professional life aspects with their study load, they wonder about the organisational outlines of these programme options. According to these documents, the students have only four weeks of theoretical and practical training at the university, while the remaining time is marked as “Independent education and professional practice (integrated with production)”. However, this form of education is not covered by the regulations and module descriptions provided and a separate specific programme concept would be needed to assess this variant of the programmes. On the current information base, the experts deem this to not be a feasible distribution of the teaching activities which cannot guarantee the equal higher education of part-time students. However, as the university has applied only for the full-time version of the programmes, the experts do not further pursue this matter but stress that their accreditation assessment explicitly excludes the part-time study programmes.

In summary, the experts confirm that the curricula of all three programmes enable the students to achieve the respective defined learning outcomes and adequately correspond the EQF level 6 for Bachelor´s degree programmes. They further conclude that the curricula of all programmes are aligned with the subject-specific criteria of the Technical Committee 08. The experts gain the impression that each module, respectively course represents a well-matched unit of teaching and learning, and they specifically stress the close integration of theory and practice through the laboratory activities and internships. The structure of the programmes are generally sensible, although the experts question the order of some of the modules which, judging from the module titles, appear to provide specialised modules before basic modules. Based on the on-site interviews, the experts gain the impression that this is not the case and that the modules are logically structured; however, this is not concisely outlined and defined in the module descriptions which need to be corrected. In this regard, the module titles should be more precisely adjusted to the contents of each module. Content-wise, the experts recommend for all programmes to strengthen the general competencies in the curriculum to give the "specialists" an understanding of their professional environment, e.g., in the fields of economics, business administration, and social sciences.

Internationalisation and student mobility

According to the Self-Assessment Report, TSAU has multiple partnerships with institutions like the Leibniz Institute in Germany, the University of Pisa in Italy, the Latvian University of Natural Sciences and Technology, the Linnaeus University in Poland, the Chungnam National University in South Korea, the Guangdong University of Oceanography in China, the Kazakh Agrotechnical University, the Kyrgyz National Agrarian University, and the International Center for Biosaline Agriculture.

In terms of numbers, TSAU lists that, since 2020, 12 students of the BaAG programme have completed internships in Germany (e.g. Agroimpuls Bayern, AZ-Germany, Charly's Erdbeere) and the UK (Hops of the UK). Although the experts deem these opportunities for students to go abroad generally useful, the get the impression that students mainly work as cheap labour for the companies and therefore point out that the learning trajectory of students should still be in the focus of "academic" mobility. For BaPQP, 9 students went to Germany for internships or exchange semesters at the Wenzhou Vocational College of Science and Technology Institute in China. For BaTSPAP, 8 students are listed to having participated in international mobility activities. Likewise, all programmes have hosted incoming exchange students from Turkmenistan, Tajikistan, Kazakhstan, and Afghanistan. As the university representatives add, currently, about 20 foreign students from China, Kazakhstan, Turkey, and Korea study at TSAU. The corresponding ministerial regulation contains

transparent provisions about the recognition of credits obtained during mobility periods based on the issued Transcript of Records (see also section 1.4).

During the on-site interviews, the university representatives stress their strive for internationalisation of the university with the goals of enabling more academic mobility, attracting foreign students, and attracting foreign funds. In this regard, the university has implemented joint degree “1+1”, “1+2”, and “2+2” programmes with different universities, during which students structurally spend part of their studies at TSAU and part at the partnering institution (e.g., one year at TSAU and one year at a partner institution during a “1+1” programme). However, this programme structure does not yet exist for the three programmes under review. Moreover, the university wants to attract more foreign students through internships and summer schools and supports incoming students with free dormitories, sports facilities, and support with travel and residence permit arrangements.

The students confirm their overall satisfaction with the student service regarding international mobility and the students who have taken part in mobility activities report good support for the organisation and realisation of their experiences. However, despite high interest, the share of students who can take part in international mobility activities is still low. According to the students, problems that hinder participation in the mobility programmes are family circumstances, funding, and English language competence. The experts note that English language competency is a problem, as the language modules integrated into the curricula are insufficient for many students to attain the necessary language proficiency. To outbalance this shortcoming, multiple extracurricular offers provide students with the opportunity to advance their language skills, which is positively regarded by the experts. Still, the language competency remains a big challenge for many of the students and the experts therefore suggest increasing the efforts of teaching students the English language. This need for better English language skills and international exchanges is confirmed by the representatives of the industry who also mention that they are in need for specialists with international experience.

Given that all modules are generally taught in Uzbek or Russian language, the experts also wonder how foreign students without foreign language skills in Uzbek or related languages can attend the classes. It is explained that some of the teaching staff who know English well teach these students if necessary. For all module which cannot be adequately covered with TSAU´s own staff, external lecturers are hired (see section 3.1). Moreover, it becomes clear that most of the incoming mobility is directed towards the English-taught summer schools instead of a regular semester study period.

In summary, the experts acknowledge TSAU´s efforts to foster student mobility and confirm that the university promotes student mobility through an appropriate framework.

Nevertheless, they still see room for improvement and recommend to further foster both outgoing and incoming international student mobility which goes together with the above-mentioned recommendation to support the students´ English language competency through more extensive integration into the teaching methodology and more extracurricular offers.

Periodic review

According to the Self-Assessment Report, the curricula are reviewed periodically at least every three years in an extensive process that involves relevant stakeholders, as explained also in section 1.1. Representatives of professional associations can request new topics/ modules to be included in the curriculum, based on which the professors of the relevant department then (re-)design and propose the modules to the pedagogical methodological council of the faculty. The students confirm that they are represented in the faculty council and, thus, have the opportunity of participating in the decision-making process. The final decision is then made by the university council based on the recommendations of the aforementioned committees. The Self-Assessment Report documents relevant topics and subjects that have been introduced into the programmes within the past 5 years. The close involvement of the industry in the development and delivery of the programmes also becomes apparent during the on-site visit.

In summary, the experts confirm that the curricula are periodically reviewed with regard to the implementation of the programme objectives in a process that involves all relevant stakeholders, including the students. The review process involves a formal curriculum board and is adequately documented.

Criterion 1.4 Admission Requirements

Evidence:

- Self-Assessment Report
- Ministerial regulation “on improving the procedure of admission and training of foreign citizens to educational institutions of the Republic of Uzbekistan”
- Ministerial regulation “on measures to improve the system related to the organization of the educational process in higher education institutions”
- Discussions during the audit

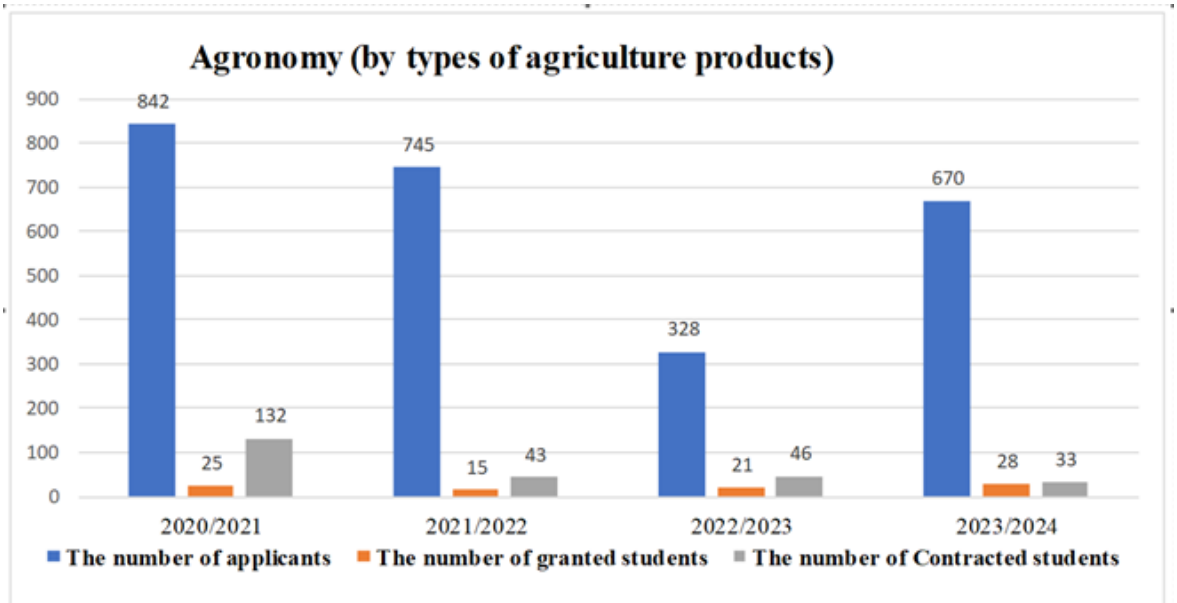
Preliminary assessment and analysis of the experts:
According to the Self-Assessment Report, the admission criteria and procedures follow the ministerial regulation “on the approval of the regulations on the procedure for admission to higher education institutions, transfer of students' studies, reinstatement and exclusion from studies”. As a prerequisite, applicants for undergraduate programmes must have completed secondary general (general secondary), primary vocational (technical-special), or secondary vocational school. Practical or professional experience is not required. The bases for the admission are the results of a state examination administered by the State Testing Centre. This “National Exam” is a national test which consists of a general compulsory and a subject-specific component for each study programme offered in Uzbekistan. The respective examination subjects corresponding to the Bachelor's degree programmes are approved by the Ministry of Higher Education, Science and Innovation, and are announced at least six months before the start of the examinations. The compulsory exam subjects are “History of Uzbekistan”, “Native language”, and “Mathematics”. The subject-specific components for all programmes under review are “Chemistry” and “Biology” in a more comprehensive depth. Every applicant can apply and take the tests for up to 5 programmes. Overall, the experts deem this test-based admission system suitable to ensure the necessary prior qualification of the incoming students for the programmes.

Based on the test results, there are different quotas for the admission on a scholarship or a paid basis. Applicants with the highest scores are recommended for state scholarships within a pre-announced allocation of scholarship places. In the next group, applicants are recommended by the State Commission for enrolment on a contractual basis within the allotted places. The university may admit applicants with lower marks than those recommended for state scholarships. These students may study on a paid basis, known as a “super contract”. The parameters for the fee and contract basis are published annually on the official website of the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan. Applicants with less than 25% of the maximum possible points cannot be admitted to the programmes. At the same time, a special decree of the President of the Republic of Uzbekistan establishes special quotas for the admission of female students, disabled people, and students from low-income families to university education under additional allocations based on a state scholarship, which the experts positively acknowledge.

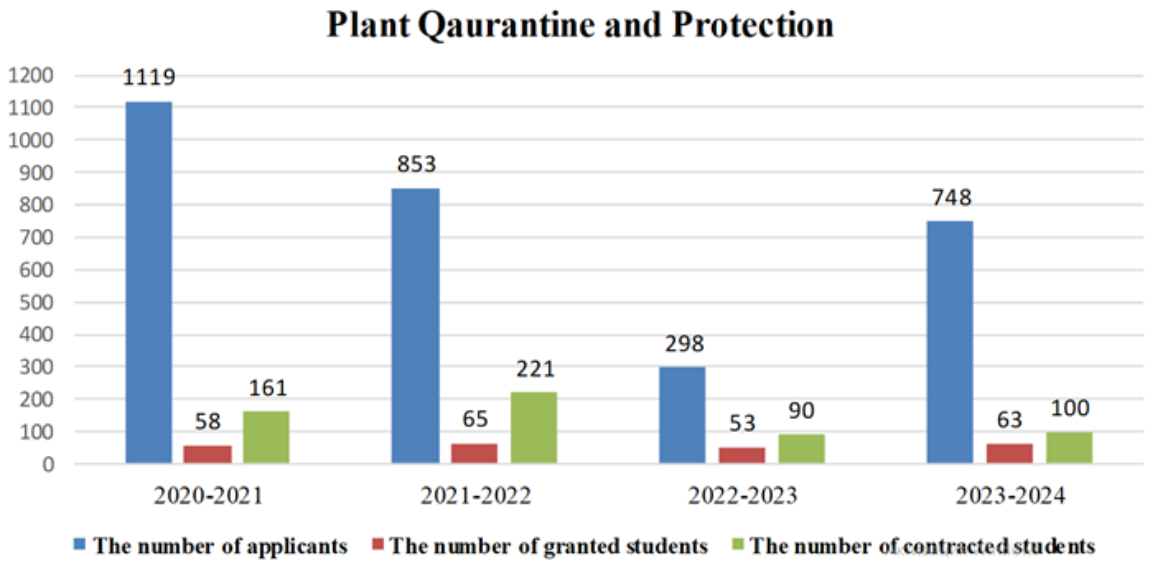
In terms of admission numbers, the representatives of the Rector´s office emphasize that the respective capacities of all study programmes are determined based on the needs of the industry in the relevant sectors. The stakeholders present at the respective meeting confirm their close collaboration for the planning of admission capacities which results in a high share of students finding employment directly after graduation in these companies. Every year, the university sends a list of its study programmes to the industrial

representation who then fills in their forecasted employment demands according to each speciality. Based on that, the Ministry determines the respective admission quotas.

The following statistics taken from the Self-Assessment Report show the development of the number of applicants and accepted students in the BaAG programme over the past five years:

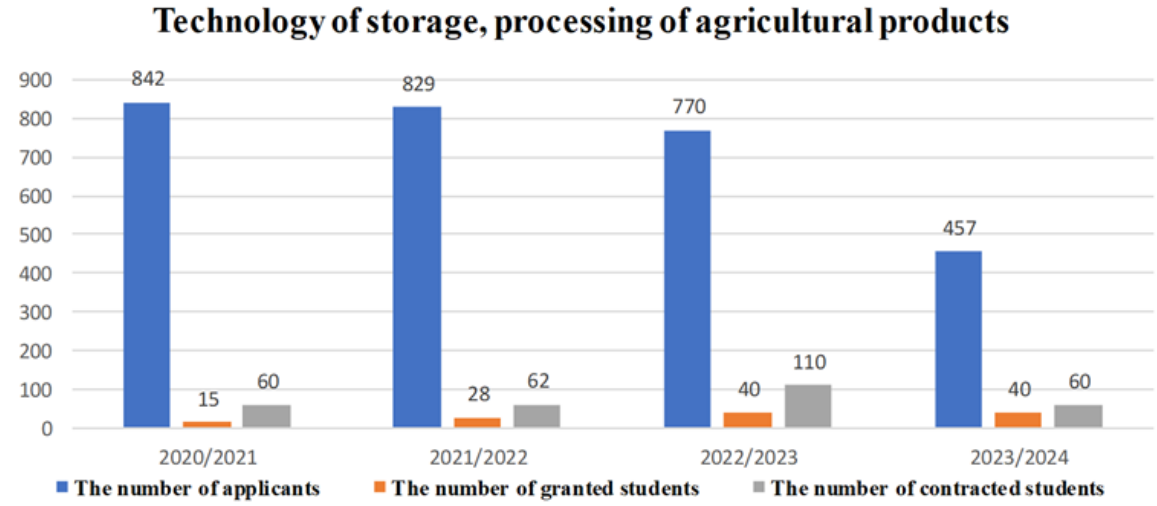


For the BaPQP programme, the numbers of applications are distributed as follows:



In the Self-Assessment Report, TSAU explains that the decrease in the number of applications for the academic year 2022/2023 notable in BaA and BaPQP is due to the near doubling of the number of higher education institutions in Uzbekistan, as well as the simultaneous opportunity to choose up to five educational directions during the application.

For the BaPSPAP programme, the application statistics are displayed in the following table:



Looking at the statistics, the experts wonder about the strong fluctuation of application numbers in both programmes. In this regard the representatives of the Rector´s office explain that the sector of higher education in Uzbekistan is booming at the moment, meaning that the number of interested and qualified prospective students is increasing a lot, while also the number of universities and university branches in the country has been increasing from 70 to about 200 over the past 10 years. Thus, the high numbers of applicants caused

by the increasing population and the higher economic and secondary educational activity, but also the increasing competition among universities, are factors that influence these statistics in recent years. Moreover, the admission pathways to universities have been changed and amended in the past which has also lead to fluctuation in the student numbers. As a measure to keep up the recruitment of students, the university representatives explain that university teachers go to schools and actively advertise for the programmes. Moreover, the university organises different student trainings, masterclasses, and courses for interested pupils to prepare them for the university and advance their subject-specific knowledge to enter the programmes. The experts positively comment on TSAU´s policy regarding student recruitment and admission and acknowledge the university´s growth to more than 15,000 active students by now.

The admission of foreign citizens to educational institutions of the Republic of Uzbekistan is carried out on the basis of international agreements of the Republic of Uzbekistan, collective and individual agreements and arrangements. Admission of foreign citizens is carried out based on the results of an interview and registration in accordance with the procedure established by the Ministry of Higher Education, Science and Innovation and the Ministry of School and Pre-school Education of the Republic of Uzbekistan. International students can only study on a paid contract basis with an annual tuition fee of USD 747 for full-time education in undergraduate programmes. The regulations are defined in the documents “On Improving the Procedure of Admission and Education of Foreign Citizens to Educational Institutions of the Republic of Uzbekistan”.

Furthermore, the ministerial regulation “On measures to improve the system related to the organization of the educational process in higher education institutions” regulates the short-term educational exchange of students (see section 1.3) as well as the recognition of credits for students to transfer between universities in Uzbekistan. This regulation describes the policy of credit recognition based on the applied credit module system (see section 1.5). The experts are satisfied to see that that formal rules for the credit recognition are based on the principles of the Lisbon Convention and are binding to ensure the qualification level.

In summary, the experts confirm that the admission requirements and procedures are binding, transparent, and also ensure the recognition of credits obtained at different higher education institutions. The admission requirements ensure the necessary prior qualification of students for the respective programmes.

Criterion 1.5 Workload and Credits

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions of all study programmes
- Decree of the Cabinet of Ministers of the Republic of Uzbekistan "on measures to improve the system associated with the organisation of the educational process in higher educational institutions"
- "Regulation on the procedure for introducing a credit-module system into the educational process in higher education institutions"
- Questionnaire on the credit module system
- Discussions during the audit

Preliminary assessment and analysis of the experts:

According to the Decree of the Cabinet of Ministers of the Republic of Uzbekistan "On measures to improve the system associated with the organisation of the educational process in higher educational institutions", TSAU applies the ECTS credit system which is based on the student workload in terms of both contact hours and independent study time. The number of credits per module and the distribution of the workload across the different forms of coursework including lectures, practical activities and independent learning are displayed in the module handbooks. One credit point is set equivalent to 30 hours of work. In all programmes, the designated credit load per semester is 30 ECTS. Thus, the Bachelor´s programmes with a duration of 4 years have a credit load of 240 ECTS. The experts are generally satisfied with the credit system and deem the credit allocation for the individual modules to be sensible.

According to the Self-Assessment Report, the appropriateness of the allocated number of credits is verified by respective questionnaires as part of the student survey conducted at the end of each module. During the on-site visitation, the experts inquire about the verification of the student workload in relation to the credits as the survey template which was presented to the experts does not contain any question on the workload and therefore does not fulfil the purpose of monitoring the student workload. Therefore, they discuss this matter with the programme coordinators who explain that the distribution of presence and self-study time is outlined for each module in the module handbooks. Based on this distribution and the number of credits awarded to a module, the respective tasks are allocated for the independent workload. In that regard, the students report a high but manageable study load but do not appear to be well-informed about the credit system itself and the

meaning of workload and a respective evaluation. Therefore, the experts require TSAU to transparently evaluate the student workload and allocate the credits accordingly. In this regard, the experts also point to the missing Bachelor´s thesis module which also needs to be credited. Nevertheless, they are satisfied to get the students´ confirmation that the workload is overall high but appropriate and distributed evenly over all semesters.

The statistics on the students´ graduation times are displayed in the following table taken from the Self-Assessment Report:

Information / Educational Directions	Academic Year	Number of accepted students	Number of graduated students	Number of expelled students
60810900-Agronomy (by types of agriculture products)	2017/2021	198	157	41
	2018/2022	73	59	14
	2019/2023	86	63	23
	2020/2024	74	61	13
60811000-Plant quarantine and protection	2017/2021	100	125	25
	2018/2022	71	71	-
	2019/2023	138	110	28
	2020/2024	137	88	49
60811300-Technology of storage and processing of agricultural product (by products types)	2017/2021	97	103	6
	2018/2022	53	48	5
	2019/2023	65	50	15
	2020/2024	66	58	8

The table shows that the large majority is able to graduate within the four-year standard period of study in all three programmes which pleases the experts. Also, students who fail certain modules can catch up appropriately (see section 2), and the number of students to drop out for academic reasons is only 5% according to the programme coordinators. On the other hand, the number of expelled students, which the experts assess to be considerably high, is explained to be caused mainly by the financial problems of contract-based students who cannot afford their tuition fees anymore (see section 3.2).

In summary, the experts confirm that a workload-based credit system is implemented, which considers both contact hours and self-study time. The total credit numbers meet the ECTS users guide´s minimum requirements for Bachelor´s, and the credit load is distributed evenly over the study period. However, the fit of the designated workload of each module

and the actual student workload needs to be evaluated transparently to give a foundation for the credit allocation.

Criterion 1.6 Didactic and Teaching Methodology

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions of all study programmes
- Programme on the graduation internship the BaA programme
- Exemplary guidelines for lab exercises
- Results of student and teaching staff questionnaires
- Discussions during the audit

Preliminary assessment and analysis of the experts:
As explained in the Self-Assessment Report, all three programmes rely on both structured classroom teaching as well as independent student work. The relation of structured classroom and practical teaching to independent work, as outlined in the module handbook for each module, is generally 40:60 which the experts deem reasonable.

Classroom teaching is done in form of lectures, practicals at the teaching farm, laboratory sessions, and seminars which employ a student-centred learning and teaching approach with ample methodology. TSAU explains in the Self-Assessment Report that a distinctive feature of its didactic concept is the integrated nature of the theoretical, professional, and practical orientation. The didactics are based on the integration of knowledge in humanitarian-cultural, socio-economic, psychological-pedagogical, and agricultural sciences, and is also closely related to the practice of agriculture. As examples of applied teaching methods, TSAU mentions case studies, decision trees, concept analyses, and the “OREG” (opinion, reason, example, generalisation) method. Furthermore, practical exercises give effective results in activating and assessing students. The students explain that the teaching activities are organised flexibly and involve a high number of projects and group works that contribute to their ability of quickly adapting to different work environments. The industrial representatives mention this competency as one of the outstanding features of TSAU students and graduates, which is acknowledged by the experts. The experts also highlight the importance of the integration of laboratory work into the classes which, according to the Self-Assessment Report, is done in multiple modules of all programmes. Exemplary laboratory guidebooks further evidence this practical teaching format.

During the on-site visitation, the experts discuss various aspects of the teaching methodology with the academic staff of the programmes and gain a positive impression of the modern and student-centred teaching approach. They positively highlight the high share of practical application which, as also the students confirm, allows for a qualitative transfer of the theoretical teaching into practice. This is additionally fostered by regular internships (see section 1.3) as well as additional excursions to different companies and production sites. Moreover, the students also positively discuss masterclasses held at the university by international guest lecturers. As an example they explain about a masterclass with visiting teachers from Poland that was organised via Erasmus Plus and offered the students the opportunity to learn about the "GLOBAL G.A.P." certificate for agricultural producers.

During the on-site visit, the experts further inquire about the students´ engagement in research activities. They wonder how the students are introduced to research methodology and practice as they do not find a research-oriented module in the curricula. The programme coordinators and teaching staff explain that students are introduced to research methods in the course of regular modules, but also during practical stages at research institutions. The research of the academic staff is actively included in the classes and students therefore participate in the lecturers´ research project on a daily basis, which is positively commented by the experts. Moreover, students have to demonstrate their research skills during the graduation internship. In that regard, however, the experts wonder why there is no mandatory Bachelor´s thesis in the curricula (see section 2), as also the industry representatives explain that they would need more graduates with the competency of conducting independent research projects for the innovation of their companies. In this regard, the experts recommend to offer a module on research methodology, strengthen project work of the students and encourage critical and controversial discussions as a methodology of scientific work.

According to the Self-Assessment Report, the instruction, in line with the first learning outcome of the Bachelor´s programmes, is delivered both in Uzbek and Russian language. The experts are curious about how this is done in practice and learn that, if there is a Russian-speaking group in the study cohort, every module is taught twice, in Uzbek and Russian language respectively. When applying for the programmes, the students have to choose in which language they want to attend the classes. The large majority of students studies in Uzbek language and it is expected that the share of Russian-speaking students will further decline in future cohorts. Currently however, a Russian-speaking group exists nevertheless in all programmes. The programme coordinators affirm that the coordination effort of this practice is quite intense but supported by the Uzbek university system, and that the number of teaching staff is still sufficient to cover the double teaching load. Some of the lecturers are apt to speak both languages and, therefore, teach both groups and, additionally,

sometimes also take over the teaching duty for modules which they usually do not teach in Uzbek. In case of shortage, additional external staff is hired on a part-time basis for the instruction of the Russian-speaking groups. In this regard, the experts intensively discuss how the quality of teaching is harmonized in both groups. The programme coordinators and teachers explain that the external staff are usually qualified and experienced research professors. However, the experts point out the workload-intensive challenge of including external staff into the teaching activities on a large scale. As students of both language groups nominally study the same programme and obtain the same degree, it is crucial to ensure that the teaching content and methodology, as well as the student assessment, are harmonised. In this regard, they recommend to put a focus on assuring the equal quality of teaching in both instruction language groups.

As evidenced by the results of questionnaires among the students which, according to the Self-Assessment Report are conducted every semester, the students have the opportunity to assess the applied teaching methodology and give open feedback. Additionally, the university also conducts surveys among the teaching staff to enquire about their self-assessment of the teaching methods, plans to change and further develop teaching approaches, and the interaction with students in class.

In summary, the experts confirm that a variety of teaching methods and didactic means are used to promote achieving the learning outcomes and support student-centred learning and teaching. The degree programmes contain an adequate balance of contact hours and self-study time. The experts also confirm that the students are introduced into scientific work through their active involvement into the teaching staffs´ projects and the graduation internship. Nevertheless, in that regard, the experts recommend TSTU to strengthen the foundations and encourage controversial and critical debates as the essence of scientific progress. Also, in terms of the two instruction language groups, it is recommended to focus on ensuring the harmonisation of contents, methods, assessments and the overall quality if classes are taught by external lecturers. Furthermore, it is regularly reviewed whether the utilised learning and teaching methods support the achievement of the programme objectives.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 1:

Criterion 1.1

In its statement, TSAU explains that the learning outcomes of the programme will be adjusted to cover the areas of scientific research and social competencies according to EQF level 6. The experts positively acknowledge this but sustain the requirement until action

has been taken. IN that regard, the experts also stress the need for an outcome-based formulation of the learning outcomes.

Criterion 1.2

TSAU explains that, based on a Ministerial decree, the name of the PQP programme has been changed to “Plant Protection and Quarantine” in 2024. Furthermore, the appendix in brackets of the BaAG programme has been cancelled based on the same decree. The experts note these changes and stress the related need for harmonising the programme titles in all available documents and websites accordingly. In this report, the titles will be adjusted on the front page and the table “about the accreditation procedure”.

Criterion 1.3

Regarding the curriculum, TSAU clarifies that the module “Plant protection” was moved to earlier semesters in the latest curriculum review. The experts wonder why this has not been explained in the documentation but generally approve this measure. Moreover, TSAU explains content-related matters regarding the foreign language modules and the integration of general competencies and economic sciences into the programmes. These however do not change the initially proposed recommendations.

Criterion 1.4

No comment was provided.

Criterion 1.5

Regarding the credit distribution and workload evaluation, TSAU states the following:

“The ECTS credit system has been fully implemented at our university, accounting for both class hours and independent study workload. Credits in all programs are distributed according to ECTS standards. To align the teaching workload for each module with the actual time students spend, monitoring and evaluation activities are carried out. The allocation of hours and credits for each subject in the educational programs is determined based on the subject's peculiarity and importance level. This ensures transparent assessment of students' real knowledge. A transparent assessment system for students' mastery of subjects has been fully implemented on the Hemis platform.”

The experts appreciate this comment but, as no evidence was provided to verify the workload evaluation activities, sustain their initial requirement.

Criterion 1.6

In terms of the teaching methodology, TSAU explains that the academic staff members involve students in their international, practical, and start-up projects to achieve the learning outcomes, which the experts deem a valuable didactical means.

Final assessment

The experts are generally satisfied with the content of the programmes. However, shortcomings regarding the scope of the learning outcomes, their formulation and transparency need to be corrected. The curricula need to include a mandatory Bachelor´s thesis, formal aspects of the module organisation need to be corrected, and all module handbooks and curricular overviews need to be reviewed and harmonised. The workload evaluation and credit distribution needs to be proven. Recommendations for further improvement are a stronger focus on general competencies of the relevant fields, and the improvement of various aspects of the internationalisation dimension. In summary, the experts consider this criterion to be **partially fulfilled**.

2. Exams: System, Concept and Organisation

Criterion 2 Exams: System, Concept and Organisation

Evidence:

- Self-Assessment Report
- Module descriptions of all study programmes
- Exemplary study schedule
- University regulation on “conducting final examinations in subjects for 2nd year students”
- Ministerial regulation “on approval of the regulation on the system of control and evaluation of students' knowledge in higher education institutions”
- Ministerial “regulation on amendments to the regulation on the final state certification of graduates of higher educational institutions of the republic of Uzbekistan”
- Ministerial regulation “state educational standard of higher education. basic rules" on approval of the state standard of the republic of Uzbekistan”
- Discussions during the audit

Preliminary assessment and analysis of the experts:
According to the Self-Assessment Report, the students´ learning achievements in each module are determined through multiple examination components: current controls, intermediate control, and the final control.

As displayed in the module handbooks, each module is usually concluded with a written, oral, or test-based final exam at the end of each semester to determine the achievement of the learning outcomes. The form of examination depends on the form and nature of the subject. The exam schedule does not allow more than one final exam per day and there should always be 2 days between each final exam. Additionally, as stipulated by the "Regulations on the system of control and evaluation of students' knowledge in higher education institutions", there can be up to 2 mid-term exams in various forms depending on the nature and credit load of a module. Modules with a credit load of less than 2 academic hours per week are exempt from midterm exams. Throughout the semester, the students´ activities and performances in practical, seminars, and laboratory sessions are monitored by the subject teachers which, as the students explain, forms a "current" mark. Only if a student has completed and passed all the mid-term assignments during the semester, he/she will be allowed to take the final examination. As another prerequisite, students must have attended at least 75% of all classes.

Some of the modules are assessed by projects. The projects are formed within the framework of the technological tasks of the companies formed at the department. The evaluation of these course works (projects) is carried out by a three-member commission.

The final exam constitutes the grade of the module. The student performance is assessed by using a 5-point system as regulated in the assessment instruction. The system, the grading bases, and its equivalents in other education systems are displayed in the following table taken from the Self-Assessment Report:

University evaluation system launched	Copying and writing system test units of European countries	USA grading system (A - F)	University grading system (%)	Mark	Student knowledge is assessed according to the following criteria:
"5"	"A"	"A+" "A" "A-"	90 - 100	excellent	The student is considered to be able to make independent conclusions and decisions, think creatively, observe independently, apply the knowledge gained in practice, understand, know, and express the essence of the subject (subject), and have an idea about the subject. - 5 grade (excellent);
"4"	"V" "S"	"V+" "V" "V"	7 0 – 89,9	good	If the student observes independently, can apply the knowledge he has gained in practice, understands, knows, expresses, and can explain the essence of the subject (subject), and is considered to have an understanding of the subject (topic) – 4 grade (good)
"3"	"D" "E"	"S+" "S" "S-" "D +" "D" "D-"	60-69,9	satisfactory	the student is able to apply the acquired knowledge in practice, understands, knows, expresses, and explains the essence of the subject (subject), and is considered to have an understanding of the subject - grade 3 (satisfactory);
"2"	"FX"	"F"	0 - 59	unsatisfactory	When it is determined that the student has not mastered the curriculum of the subject, does not understand the essence of the subject (subject), and does not have an idea about the subject - 2 grade (unsatisfactory).

Students have the right to appeal against grades within 24 hours from the publication of the exam results in the academic information system "HEMIS". There is an Appeals Committee which consists of at least five members of the academic staff that were not involved in the original assessment.

TSAU uses the key figure of Grade Point Averages (GPA), defined as the average grade of a student across all modules, to determine his or her eligibility for course-by-course transfers, scholarships, and further studies.

Students who have not received their permission to take the final examination due to prolonged absence or poor performance during the semester, or if they fail an examination, will receive “academic debt”. These students have the right to study these subjects and retake the exam during the holidays or in the next semester, however, at their own additional cost. If students decide to repeat a module during the vacation periods, they must submit a request for additional tuition during the so-called “interim semester”. Students who miss classes or fail to complete a mid-term assignment for proven “good” reasons (for health reasons, an accident, the death of a close relative, marriage, birth of a child) and correspondingly do not master the subject within the established time limit, given appropriate make-up assignments or are allowed to re-take subjects by the educational and methodological department in agreement with the Vice-rector for academic affairs. During the on-site visit, the expert discuss the opportunities for students to re-take examinations and learn that the students are satisfied with the system of the opportunity to take make-up classes in the semester break. They state that these classes are highly beneficial to the understanding of the subjects as the group sizes are very small. Thus, these classes usually result in good grades. Moreover, the number of students taking these classes is maximum four per subject.

During the on-site visitation, the experts examine selected examples of exams and confirm their adequacy for assessing the attainment of the programmes´ learning outcomes and their correspondence with the respective EQF level. The students express their satisfaction with the examination system which, in their opinion, is composed of suitable assessment methods, ensures fair assessment and is organised in a way for students to successfully complete all assignments and tasks. The students confirm that they are aware of the exam regulations in place as well as their options for the review of graded exams, appeal against grades, and remedial examinations. Moreover, the students also confirm their satisfaction with the feedback they receive on their exam performances. Both the prerequisites for exam admission as well as the grading system appear reasonable to the experts.

Moreover, the experts also examine multiple examples of Bachelor´s theses of all three programmes. They confirm their adequacy in terms of topics, methodologies, and formalities. Nevertheless, they wonder why the Bachelor´s thesis is not contained in the curricular overviews of the programmes and the module handbooks. Instead, the final component of both programmes is a so-called “State attestation” which can only be taken after the successful completion of all other modules. According to the programme coordinators, this state attestation can take two forms:

1. Set of written and oral exams in multiple compulsory and interdisciplinary subjects
2. Start-up project

3. Final graduation work

The experts learn that the final graduation work consists of an independent scientific research work under the supervision of at least one academic staff, equivalent to a Bachelor´s thesis. However, this is not compulsory and only "talented" students who fulfil certain criteria in terms of their GPA can choose this for the state examination, which is a share of about 30% of all students. The experts discuss the background of these different options with the programme coordinators and learn that only students interested in research should write a thesis, while students with entrepreneurial drive may choose the start-up project and all other students have to take the regular state attestation tests. While the experts generally understand this reasoning, they point out that one of the crucial goals of a Bachelor´s programmes is to equip students with the competency to individually work scientifically. Therefore, a Bachelor´s thesis as central element for students to demonstrate this skill is core and therefore needs to be compulsory in all Bachelor´s programmes. As mentioned before, the industrial representatives would also welcome more scientific research competencies and would also offer students to conduct research projects at their companies. Already now, they provide research topics they are interested in which can be chosen by potential thesis students. Thus, the experts require TSAU to implement a mandatory Bachelor´s thesis in the curricula of all programmes, establish transparent regulations for it, and award credits accordingly.

Furthermore, the experts confirm that the questionnaires among students and lecturers give them sufficient opportunities to evaluate the examination system.

In summary, the experts confirm that there are module-specific exams which assess the extent to which the defined learning objectives have been achieved. The types of exams are specified for each module and students are informed about the conditions for completing the individual modules. Students have sufficient time for their preparation and structural overloads are avoided. The exams are graded transparently and fairly, and students have the opportunity to review their examinations and respectively consult lecturers in regarding the results. The experts acknowledge the detailed examination regulations. Moreover, they positively comment on the examples of Bachelor´s theses presented to them during the on-site visit. However, as specified by the accreditation criteria, the preparation of a Bachelor´s thesis needs to be a crucial and therefore compulsory part of any Bachelor´s curriculum. Thus, the experts require TSAU to mandatorily include them in the curricula for all students. The experts further confirm that it is regularly reviewed whether the exams can adequately determine the achievement of the learning objectives and whether the requirements are appropriate to the levels of the degree programmes.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 2:

In its statement, TSAU explains that the Bachelor´s thesis will be mandatorily included into the curricula from the academic year 2025-26 on. The experts appreciate this but sustain their requirement until the measure has been implemented and proven, e.g by module descriptions and curricular overviews.

Final assessment:

Apart from the shortcoming that the final thesis is not implemented as a compulsory module so far, the experts are generally satisfied with TSAU´s exam system. They positively acknowledge that the university has recognised the requirement and will adjust the regulations accordingly. In summary, they consider this criterion to be **almost fulfilled**.

3. Resources

Criterion 3.1 Staff and Development

Evidence:

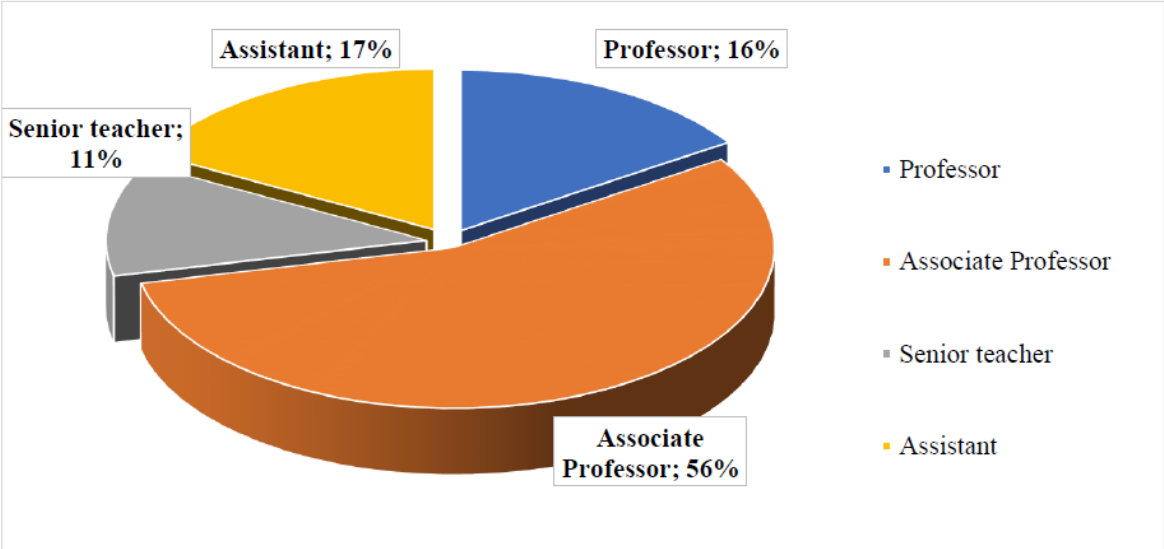
- Self-Assessment Report
- Staff handbooks of all study programmes
- Cabinet Decree “on approval of the regulations on the procedure for hiring teachers to work in higher educational institutions on a competitive basis”
- Ministerial regulation “of education in higher education institutions (educational aspects) on one account, the ratio of the number of teachers on students who come on the approval of their standards”
- “The criteria for studying the activities of teaching staff at the university are based on the evaluation of the "Key Performance Indicator" (KPI) system”
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the experts:

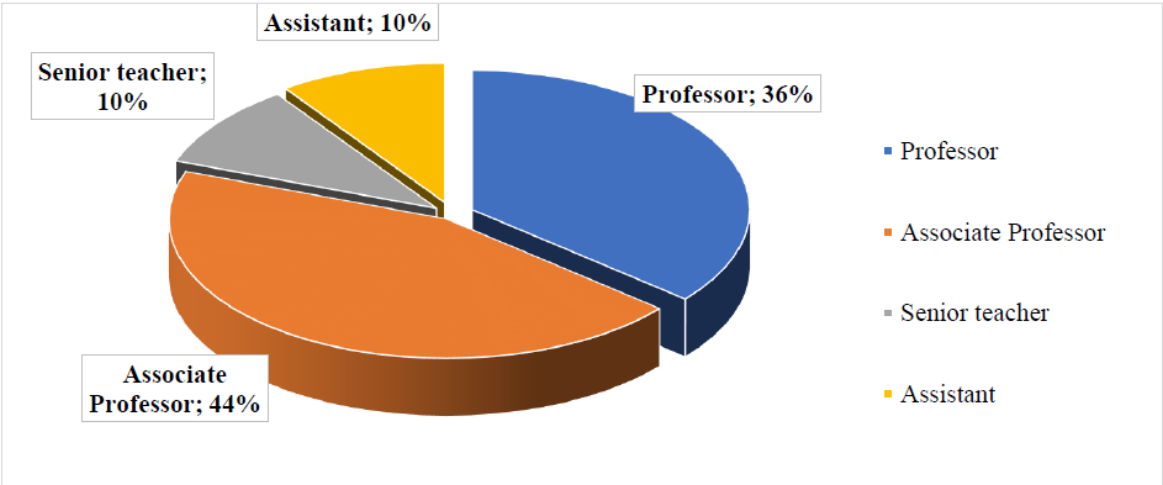
According to the Self-Assessment Report, the academic staff of TSAU is classified by the following academic ranks: professors, associate/assistant professors, senior teachers and assistants. The distribution of the teaching staffs´ workload depends on their academic rank. According to the respective ministerial regulation, the staff-to-student ratio in agricultural programmes must be at least 15.8 to 1 and, according to the programme

coordinators, the current number of staff is adequate to fulfil this requirement. Staff planning has to be done by the heads of departments who have to submit their demands for new staff annually before the start of the new academic year.

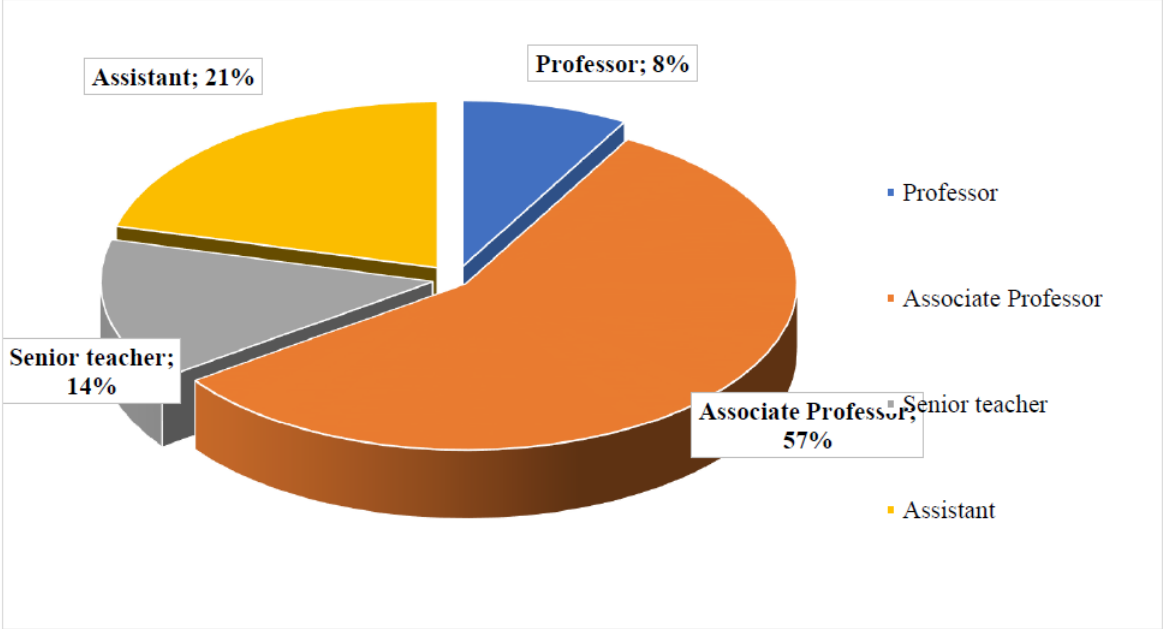
For the BaAG programme, there are 62 teaching staff in total who are distributed across the academic ranks as follows:



In the BaPQP programme, 72 teaching staff are involved in the delivery of the education to the students. Their academic ranks are displayed in the following figure



For the BaTSPAP programme there are 86 teaching staff with the following academic positions:



Comprehensive staff handbooks for all three study programmes provide information about the academic staff, their qualification, and teaching area, including short CVs, research projects and publications, industry cooperations, as well as activities in special bodies or university committees.

Besides the full-time academic staff, TSAU also relies on guest lecturers who are senior professionals and specialists in related industrial companies, regulatory authorities and research institutes. Especially for the delivery of the lectures to the Russian-speaking groups (see section 1.6), guest lecturers are crucial for the staff. Examples of involved industries, as listed in the Self-Assessment Report, are the Central Council of the Ecological Party of Uzbekistan, the Research Institute of Cotton Selection, Seed Breeding and Agrotechnologies, the Plant Quarantine and Protection Research Institute, the Research Institute of Tashkent Vaccines and Serums, and the Tashkent Institute of Chemical Technology. Multiple industry representatives present during the audit confirm their involvement in the teaching activities of the programmes, mostly during site visits of students at their respective production sites or offices, as well as during the internships. Besides that, also guest university professors from foreign universities are regularly involved in the teaching activities as well as the research projects of the staff. Exemplarily, guest professors have recently come from South Kazakhstan University, Northwest A&F University in China, Agricultural University of Spain, The Chungnam National University in South Korea, Latvia University of Life Sciences and Technology, and the Polish State University of Agriculture in Krakow.

Overall, the experts are satisfied with the number and qualifications of the academic staff which facilitates a close supervision of all students and ensures the quality of the degree programmes. The experts also positively note that TSAU seeks to include external experience in its programmes, both from the national industrial practice sector as well as international academic expertise. Nevertheless, as mentioned in section 1.6, the experts urge TSAU to focus on ensuring the harmonized quality of its education in both instruction languages as they deem it important that the main part of the teaching is covered by the university´s own staff and that the second teaching language, if offered, should not only be realised by external guest lecturers.

Staff development

According to the Self-Assessment Report, TSAU also offers an extensive system for the development of their staff. The minimum qualification to become teaching staff at the university is a Master´s degree. As a first measure of qualification, TSAU actively supports its junior staff to obtain Doctoral degrees, which includes research funding and support for the participation in international and local conferences; recently, among others, in Japan, China, Kyrgyzstan, Korea, and Kazakhstan. Structured staff development courses are organized by the network centre of improving qualification under the university once every three years. To assess the professional skills of academic staff, a faculty council has been established which consists of professors of the faculty, student and experts from the industry respectively research institutes. The objective of this council is to monitor and test the skills of the academic staff in giving classes.

In that regard, the experts inquire how the keep up their practical knowledge. It is explained that, although it is not required for lecturers to have previously worked in the industry, many teaching staff members have practiced before entering lecturing positions. Moreover, many teaching staff are also active as counsellors to industrial companies and therefore continue to gain first-hand insights. To keep up with recent developments besides the staffs´ own research, the academic staff must undergo a subject-oriented training every three years. These training seminars are organized in cooperation between different specialized universities which select the topics and design the courses. In addition, methodological trainings are offered after the conclusion of each academic year, e.g. IT courses, English language courses for teachers, or workshops on the supervision of research theses.

In terms of research, the academic staff confirm their overall satisfaction with the environment provided by TSAU. Besides the well-equipped laboratories and the extensive experimental/ teaching farms (see section 3.3), the lecturers confirm that they have enough time, material and resources to conduct their own research projects. They also explain that the university supports them to publish in international journals and take part in international

scientific conferences. The experts positively mention that most of the teaching staff has published more than once in international journals which they consider an outstanding fact compared to previous experiences in the region.

The qualifications of the teaching staff is regularly monitored by the so-called faculty public council which includes professors and teachers from the faculty, as well as qualified specialists working in production enterprises. This includes an annual paper-based evaluation of the staffs´ teaching, research, methodology, work with youth, and community activities by the university based on the annually set performance indicators. Part of these performance indicators are the goals set by the teachers themselves in the regularly conducted staff surveys which, among others contain self-reflective questions on teaching, research and personal development goals. Moreover, as mandated by ministerial regulations, professors and teachers undergo an assessment every 5 years. As part of this assessment, the staff needs to deliver open lectures and take tests to assess their subject-specific and didactical skills. Lecturers who fail this test can be dismissed from the university. As the experts consider this a comparatively harsh measure, they further enquire about this assessment. The representatives of the university representatives explain that this public assessment is designed to motivate the teaching staff and ensure their continuous improvement and engagement. However, an unfavorable evaluation outcome does not necessarily result in immediate dismissal, but the obligation of additional training or the degradation of the academic rank are considered as milder measures in the first instance. Only if a staff member fails this test again at a second attempt, he/ she will be dismissed. Overall, the failure rate in this evaluation is very low which pleases the experts.

In summary, the experts confirm that the composition, professional orientation, and qualifications of the teaching staff are suitable for successfully delivering the degree programmes. However, they see it critical that large parts of the core curricula need to be covered by external lecturers if there are Russian-speaking cohorts, which the experts deem a burden in terms of coordination effort and finances. In this regard, they repeat their recommendation to focus on assuring the equal quality of teaching in both (Uzbek and Russian) instruction language groups. The lecturers´ research and development contribute to the desired level of education. Lecturers have different opportunities to further develop their professional and didactic skills and are supported in using corresponding offers. Moreover, the experts confirm that it is regularly reviewed that the subject-specific and didactic qualifications of the lecturers adequately contribute to the delivery of the degree programmes.

Criterion 3.2 Student Support and Student Services

Evidence:

- Self-Assessment Report
- TSAU website: https://tdau.uz/en/
- Discussions during the audit

Preliminary assessment and analysis of the experts:
In terms of student support services, TSAU has recently established a student support centre which the experts visit as part of their facility tour. In this centre, support staff provide students with all kinds of counselling and support services, including study advice, administrative support, help with contract payments or the application and management of scholarships, the administration of student facilities, and advisory services for student exchange programmes.

While the experts are satisfied with this counselling offer, they point towards the considerable number of students who, according to the programme coordinators, drop out of the university due to financial reasons. The experts deem this waste of potential and resources, especially if students have already completed parts of their degree. Also, high-performing student might be lost due to financial problems. The programme coordinators explain that they are aware of this problem and already seek to support students from low-income families, among others by looking for industrial sponsors for these students. Moreover, the student union has set up a programme to cover tuition fees for students who cannot afford them anymore. The experts acknowledge these efforts but nevertheless recommend increasing the financial support for contract-based students to decrease the number of drop-out due to financial reasons.

On TSAU´s campus there are multiple student dormitories which provide accommodation to over 900 students. Also, the campus offers a sports centre and a football pitch which is about to be renovated. The sports centre offers students the opportunity to participate in various clubs and activities. Besides sports, there are also student clubs and associations among others for dancing, music, fine arts, and sewing, as well as extracurricular academic offers e.g. for foreign languages or additional research training. An entrepreneurship centre on campus provides the students with a room and personnel support to develop and pitch their business ideas and plans. The experts find it remarkable that even a representative of an Uzbek investment bank is permanently stationed in this centre and supports the students to apply for loans and grants to set up their businesses. Examples of products and technologies developed by students in the course of their studies are presented to the experts during the audit as part of an innovation fair. The students confirm their overall

satisfaction with the offer of advice, counselling and support, as well as the opportunities to engage in extracurricular activities, student unions and clubs.

Furthermore, the well-maintained both physical and digital facilities (see section 3.3) support the study progress.

In summary, the experts confirm that TSAU provides sufficient human resources and organisational structures for individual supervision and support of students, as well as administrative and technical tasks. The allocated advice and guidance on offer assist the students in achieving the learning outcomes and in completing the programmes within the designated time frame.

Criterion 3.3 Funds and equipment

Evidence:

- Self-Assessment Report
- Examples of cooperation agreements
- Library website: https://library.tdau.uz/uz
- Discussions during the audit

Preliminary assessment and analysis of the experts:
As the representatives of the Rector´s office explain, TSAU is a is a self-financed university which, despite its affiliation to the government, has authority over its own finances. The budgetary plans displayed in the Self-Assessment Report show that the university has more than doubled its budget since 2020:

Elements	2020	2021	2022	2023	2024
Financing from the republican budget	2 887,9	3 852,5	3 650,6	3 556,2	4 276,5
Payment-contract funds of the University	3 903,3	6 023,9	7 568,6	8 011,3	9 732,3
Extra-budgetary "**development fund**" funds of the University	418,8	705,0	1 005,7	1 208,8	1 233,2
"extra-budgetary development fund" funds of the University (practical, fundamental and innovative projects)	99,0	206,5	64,9	158,3	256,7
Local budget funds (**Open Budget**)	0,0	0,0	0,0	96,0	82,8
Total	**7 308,9**	**10 787,9**	**12 289,9**	**13 030,7**	**15 581,5**

The financial plan shows that the main income share of the university stems from tuition fees of the students who study on a contract basis. About a quarter of the budget is public funding, while further financial resources are acquired via contracted research, university services to the public, international investment, and third-party research funding. On the expense side, the main cost units are staff salaries and scholarships. Furthermore, significant investments into the facilities, equipment and the library are recorded. As the library resources are mentioned as a resource with room for improvement in the student surveys, the experts are satisfied to see TSAU´s investment into this facility. The experts confirm that the financial situation of the university is a stable basis for the delivery of the three programmes and positively acknowledge the university´s objective of more financial and logistical independence and its strive for innovation to reduce expenses, e.g., by the installation of solar panels for energy production on almost all university buildings, and an independent heating system.

In terms of physical facilities, TSAU has one central campus located in the northeast of Tashkent with teaching and research buildings as well as support facilities. There are multiple lecture and seminar rooms, offices, and as different laboratories which the experts deem well-equipped for the delivery of the education. Furthermore, there are a main auditorium, different meeting rooms, service rooms, and a cafeteria. Tables displayed in the Self-Assessment Report show that TSAU has recently invested in computer pools, smart classroom technology, and multimedia studios for the production of digital learning applications. Computers in all computer classrooms are equipped with up-to-date software

including Microsoft Office programmes, S++, CorelDRAW, 3D MAX, Adobe, Mathcad, MATLAB, KOMPAS-3D, and AutoCAD. For the management of digital learning resources, TSAU employs the “HEMIS” information system and the university´s own electronic learning system (dl.tdau.uz). Via this modular application, among others the curriculum planning and class scheduling are organized. Wi-Fi is accessible all over the campus.

During the on-site visit, the experts exemplarily review the Plant Protection Laboratory, which is well-equipped, complies with common safety standards, and provides a modern environment for both research activities and the practical instruction of students. Further laboratories are shown via video. Moreover, the experts visit the university´s main, extensive teaching farm which is located in walking distance from the campus. According to the programme coordinator, there are two more farms at a larger distance from the campus. Besides the cultivation of a large variety of plants, the teaching farm provides facilities for the students to observe and perform different techniques for the primary processing of agricultural products, such as different methods for drying fruit. The experts are satisfied to see that students are actively engaged in the farm work together with teachers as well as independently for exercises.

Moreover, there is a central “fundamental library” located on campus which is one of the biggest libraries in Uzbekistan and provides access to a broad number of educational resources in Uzbek, Russian and English language. There are 10 reading rooms with 478 seats for users. As results of the student surveys have identified the availability of modern research literature as one of the shortcomings of the university´s educational services, a recent focus of the university´s development is on investment in the library resources. Besides the acquisition of physical books and journals, particular attention is paid to the introduction of new information technologies. The library operates on the IRBIS64+ programme which is designed for the electronic library creation and maintenance. According to the Self-Assessment Report, about 95 thousand bibliographic records have been included in the programme´s database and electronic catalogue. All library resources are accessible via the library website, including access to platforms like ResearchGate and Scopus.

In summary, the experts confirm that the financial resources, the facilities, and the available equipment constitute a sustainable basis for delivering the degree programmes. This includes secure funding and reliable financial planning and the provision of sufficient infrastructure and teaching equipment in terms of both quantity and quality in all programmes. The experts positively highlight the modern laboratories and the teaching farm.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 3:

TSAU did not comment on this criterion.

Final assessment:

The experts are generally satisfied with TSAU´s staff and facilities and positively highlight the staff engagement, student services, and practical teaching facilities. Room for improvement is identified with respect to the English language competency as well as funding for mobility activities and scholarships. In summary, the experts consider this criterion to be **fulfilled**.

4. Transparency and Documentation

Criterion 4.1 Module Descriptions

Evidence:

- Self-Assessment Report
- Module handbooks of all study programmes
- Websites of all study programmes

Preliminary assessment and analysis of the experts:

After studying the module handbooks, the experts confirm that the descriptions generally provide the relevant information, including course name, course code, name of teacher/teachers in charge, the students' total workload, awarded credit points, exam formats, learning outcomes, content summary, and recommended literature. However, as noted above in multiple instances, the experts see the urgent necessity to revise and specify the module descriptions. Particular issues to be addressed are the following:

- Each module, i.e. a self-contained curricular unit, needs to be outlined and marked with a unique identifying course code and specific course title. The titles need to be harmonised with the module contents.
- Ensure the completeness of the handbooks with descriptions of all modules (including also the practice modules, thesis, etc.)
- The learning outcomes and teaching contents must be correctly, clearly and specifically defined.

Moreover, the experts also recommend publishing the module handbooks on the programmes´ websites to ensure accessibility and transparency to all stakeholders of the programmes.

Criterion 4.2 Diploma and Diploma Supplement

Evidence:

- Self-Assessment Report
- Ministerial regulation “Samples on approval of the state of higher education on bachelor's and master's degree”
- Sample of Diploma Certificates and Diploma Supplements for both study programmes

Preliminary assessment and analysis of the experts:
The experts confirm that the students of the three study programmes are awarded a Diploma Certificate and a Diploma Supplement upon completion of their studies. The Diploma Supplement includes a Transcript of Records that lists all modules completed by the student and the respective obtained grades. Both documents are also issued bilingually in Uzbek and English. While the experts are satisfied with the Diploma Certificate, they point out that the information base provided by the Diploma Supplement is insufficient. Firstly, the learning objectives need to be clearly stated on the document. Secondly, the experts point out that, while the Transcript of Records displays a “total number of hours in the curriculum” for each module, there is no information about the awarded credits. Lastly, the experts require TSAU to include statistical data like cohort statistics in the Diploma Supplement to enable the readers to assess the individual performance of the student in relation to a group.

Criterion 4.3 Relevant Rules

Evidence:

- Self-Assessment Report
- Charter of TSAU
- TSAU code of ethics
- Websites of all study programmes
- Discussions during the audit

Preliminary assessment and analysis of the experts:
According to the Self-Assessment Report, the foundation of all regulations at TSAU is the university´s charter. Furthermore, the rights and obligations of all university members are

outlined in the code of ethics. During the on-site visit, the students confirm their awareness of these regulations and further confirm that they have access to all regulations via the HEMIS information system. Still, the experts suggest to increase transparency and accessibility by also publishing these documents on the university´s website.

In addition, they also confirm to have access to all course-relevant information regarding their studies. The experts are satisfied to hear this but require to publish all relevant degree programmes (e.g. module handbook, study plan, intended learning outcomes) on the websites of the programmes (compare section 1.1, 1.3). In this regard, the programme coordinators explain that the website has only recently been reworked, and not all contents has been migrated to the new website yet. Still, the experts recommend increasing the information content online, especially for the English version of the website.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 4:

In the statement, TSAU gives further explanations regarding the current version of the Diploma Supplement. However, the mentioned deficiencies remain, and the experts therefore sustain the respective requirement.

Final assessment:

The experts point out that multiple aspects of TSAU´s documentation, including the composition of the module handbooks and the Diploma Supplements need to be reviewed and improved according in accordance with the provisions outlined in this report. In summary, they consider this criterion to be **partially fulfilled**.

5. Quality management: quality assessment and development

Criterion 5 Quality management: quality assessment and development

Evidence:

- Self-Assessment Report
- University regulation “About the department of quality control of education”
- Charter of TSAU
- Samples of surveys for students, teachers and industry partners/ graduates
- Overviews of survey results

- Discussions during the audit

Preliminary assessment and analysis of the experts:
TSAU´s quality management system includes elements of both internal as well as external quality assurance. According to the regulations "About the Department of quality control of education", the university´s central actor of internal quality assurance is the Department of Quality Control of Education. This departments´ function is to study the compliance of the education with state standards, monitor the quality of training, organise internal certification of TSAU, identify factors that negatively affect the quality of education, and take measures to eliminate and prevent them. As part of its quality management activities, the department employs multiple online survey instruments directed at students, teachers, and industry partners respectively graduates, as explained in previous sections of this report. Examples of the survey questionnaires and stylised results were presented to the experts as part of the Self-Assessment Report.

The results of these surveys are collected and evaluated by the department, which provides them an information base to all university units to prepare for the internal audit by the university´s managing board. The internal audit is conducted annually at the end of the academic year. This audit is based on reports of all units/ departments of the university to determine the performance, work out plans for their improvement, and establish future strategies and missions for these units. The university council and faculty councils are also considered in this process.

During the on-site visit, the experts discuss the internal quality assurance processes with all stakeholders of the programmes and gain a generally positive understanding of the quality culture at TSAU. However, as a shortcoming, the students mention that there is no structured feedback system to discuss or report the results and actions taken based on their feedback surveys back to the students. Therefore, the experts require TSAU to close the feedback loop and inform students about the results of their feedback.

Likewise, TSAU has an extensive network of industrial stakeholders which are included to the development and quality assurance processes for the programmes in different ways. Besides the programme-specific formal and informal feedback channels described above, as the stakeholders explain during the on-site interview, satisfaction surveys are conducted among industrial partners and employers to assess the perception of the university´s educational success from outside. During the on-site interview, the industry representatives confirm their close collaboration with the university. Furthermore, they stress the importance of the study programmes under review for the country of Uzbekistan which is highly reliant on the agricultural sector that contributes about 20% to the country´s GDP.

As an element of external quality assurance, TSAU seeks international benchmarking through the participation in different international university rankings. In addition, TSAU started to pursue the international accreditation as an instrument of external quality control and development, enhancement of quality standards, and increase of reputation. The accreditation procedure for these three study programmes is the first accreditation at TSAU conducted by ASIIN.

In summary, the experts confirm that the study programmes are subject to periodical internal as well as external quality assurance in a process that includes all relevant stakeholders. The system includes a large network of external industrial stakeholders as well as the university staff and students. While the experts are generally satisfied with the internal quality assurance mechanisms, they point out that a structured feedback mechanism is required to close the feedback loop to the students. The experts encourage TSAU to continue its path of international benchmarking for enhancing the programmes´ quality.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 5:

TSAU did not comment on this criterion.

Final assessment:

Besides the unclear state of the workload evaluation, the experts are generally satisfied with the university´s quality assurance system. They consider this criterion to be **almost fulfilled**.

D Additional Documents

Before preparing their final assessment, the panel ask that the following missing or unclear information be provided together with the comment of the Higher Education Institution on the previous chapters of this report:

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E Comment of the Higher Education Institution (28.06.2025)

The following quotes the statement provided by TSAU:

“[We] would like to inform you about the following regarding the report:

1.1. Objectives and Learning Outcomes of a Degree Programme (Intended Qualifications Profile): In accordance with EQF level 6, efforts are being made to expand the scope of learning outcomes in the areas of scientific research and social competencies to fully cover the level of graduates. Practical work on this will be regularly presented on the updated university website.

1.2. Name of the Degree Programme: Based on the Order No. 168 dated May 20, 2024 of the Ministry of Higher Education, Science, and Innovations, the name of the educational program “Plant Quarantine and Protection” has been revised to “Plant Protection and Quarantine”, and the name of the “Agronomy (by types of agricultural products)” program has been revised to simply “Agronomy” (Appendix 1).

1.3. Curriculum: In the educational programs of curriculum, the subject “Foreign Languages” is listed, where students in secondary special education systems are taught English, German, and French, and after being admitted to the university, they have the option to choose one of these languages to continue their studies.

The curriculum and study programs for the Agronomy are being continually improved based on the educational programs of the World's Top-300 higher educational institutions. In the curriculum approved in 2023, the subject “Plant Science” was scheduled to be taught in the 7th-8th semesters, but in the curriculum approved in 2024, the “Plant Science” subject is scheduled for the 2nd-3rd years (4th, 5th, and 6th semesters), which aligns with the proposals you have provided (Appendix 2).

The subject “Agribusiness organization and Management” is based on the integration of agronomy and economic topics. To master this subject thoroughly, students must first have a strong understanding of agronomy subjects (land and water resources, farming systems, basics of plant cultivation, crop storage and processing, etc.). Therefore, taking into account the suggestions and feedback from specialists and professionals in the field, it has been scheduled to study in the 8th semester.

In the development of the 2023 curriculum, while analyzing the curricula of leading foreign higher education institutions, it was found that in the economic sciences block, subjects such as “Agribusiness Organization and Management”, “Agricultural Economics”, and

“Agricultural and Food Marketing” were included among the elective subjects for students. The subject “Accounting and Taxation” was not included in the curricula of agronomy programs at most foreign higher education institutions.

1.5. Workload and Credits: The ECTS credit system has been fully implemented at our university, accounting for both class hours and independent study workload. Credits in all programs are distributed according to ECTS standards. To align the teaching workload for each module with the actual time students spend, monitoring and evaluation activities are carried out. The allocation of hours and credits for each subject in the educational programs is determined based on the subject's peculiarity and importance level. This ensures transparent assessment of students' real knowledge. A transparent assessment system for students' mastery of subjects has been fully implemented on the Hemis platform.

1.6. Didactic and Teaching Methodology: Professors and instructors involve students in international, practical, and start-up projects to achieve the learning outcomes. Over the next three years, 38 students have been engaged in various projects related to their educational programs.

2. Exams: System, Concept, and Organization: As indicated in the accreditation criteria, starting from the 2025-2026 academic year, the completion of a graduation thesis paper will become a mandatory part of the curriculum for all graduates, with a step-by-step approach to its full coverage. Exams are fully aligned with the learning objectives and meet the qualification requirements.

4.2. Diploma and Diploma Supplement: Starting from the 2020-2021 academic year, the credit-module system had been implemented in the Bachelor’s degree programs. Accordingly, the Diploma Supplement reflects the total hours and credits for each module in the curriculum, and the Diploma and Diploma Supplements of three educational programs are attached (Appendices 3-4).

We consider the proposals and recommendations you presented are going to be crucial for the university’s future development, and we are pleased to engage in long-term collaboration with the ASIIN organization. We are also grateful for the positive evaluation of the TSAU educational programs report by the ASIIN accreditation commission experts.”

F Summary: Expert recommendations (02.06.2025)

Taking into account the additional information and the comments given by TSAU, the experts summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programmes	ASIIN Seal	Maximum duration of accreditation
Ba Agronomy	With requirements for one year	30.09.2030
Ba Plant Protection and Quarantine	With requirements for one year	30.09.2030
Ba Technology of Storage and Processing of Agricultural Products	With requirements for one year	30.09.2030

Requirements

For all programmes

A 1. (ASIIN 1.1) Expand the learning outcomes with respect to the dimensions of research and social competences as outlined in the subject-specific criteria.

A 2. (ASIIN 1.1) The learning outcomes need to be formulated in an outcome-based way according to the nature of the concept.

A 3. (ASIIN 1.1/ 1.3/ 4.3) Transparently publish the learning outcomes, curricula, and module handbooks on the programmes´ websites.

A 4. (ASIIN 1.3/ 1.5/ 2) Implement a mandatory Bachelor´s thesis, establish transparent regulations for it, and award credits accordingly.

A 5. (ASIIN 1.3/ 4.1) Revise the module handbook with the scope of:

a) Ensuring completeness and coherence of all information for all modules. The titles need to be harmonised with the module contents.

b) Specifying the learning outcomes and provide clear content descriptions.

c) Concisely outlining all individual modules with singular IDs and titles.

A 6. (ASIIN 1.5/ 5) Transparently evaluate the workload of students.

A 7. (ASIIN 4.2) The Diploma Supplements need to contain the learning outcomes, show the number of credits of the modules, and display statistical data to allow for an assessment of the relative student performance.

A 8. (ASIIN 5) Close the feedback loop and inform students about the results of their feedback.

For BaPQP

A 9. (ASIIN 1.2) The programme name needs to be used consistently in all official documents.

Recommendations

For all programmes

E 1. (ASIIN 1.3) It is recommended to design the modules for a duration of only one semester.

E 2. (ASIIN 1.3) It is recommended to strengthen the general competencies in the curriculum, e.g. in the areas of economics, business administration, and social sciences.

E 3. (ASIIN 1.3/ 3.2) It is recommended to foster English language competency through better integration into the teaching methodology and more extracurricular offers.

E 4. (ASIIN 1.3/ 3.3) It is recommended to foster both incoming and outgoing student mobility.

E 5. (ASIIN 1.4/ 1.5/ 3.2/ 3.3) It is recommended to increase the financial support for contract-based students to decrease the drop-out rates due to financial reasons.

E 6. (ASIIN 1.6/ 1.3) It is recommended to offer a module on research methodology, strengthen project work of the students and encourage critical and controversial discussions as a methodology of scientific work.

E 7. (ASIIN 1.6/ 3.1/ 5) It is recommended to assure the equal quality of teaching in both (Uzbek and Russian) instruction language groups.

E 8. (ASIIN 4.1) It is recommended to transparently publish the module handbooks on the programmes´ websites.

E 9. (ASIIN 4.3) It is recommended to increase the information content online, especially for the English version of the website.

G Comment of the Technical Committee 08 - Agriculture, Forestry and Food Sciences (03.06.2025)

Assessment and analysis for the award of the ASIIN seal:

The TC discusses the procedure which was the first international accreditation procedure carried out by ASIIN at this university. Critical points in relation to the procedure are, in particular, issues relating to the organisational structure of the degree programme (e.g. the obligation to complete a Bachelor's thesis, credit point distribution and evaluation), formalities and documentation. In terms of content, the main focus is on recommendations. In view of the large number of proposed conditions, the FA discusses whether it would be better to suspend the procedure. However, as the expert group was convinced by the content of the degree programmes and the required changes could be implemented within a year, the members of the FA agree to accreditation with the proposed conditions and recommendations.

The Technical Committee 08 – Agriculture, Forestry and Food Sciences recommends the award of the seals as follows:

Degree Programmes	**ASIIN Seal**	**Maximum duration of accreditation**
Ba Agronomy	With requirements for one year	30.09.2030
Ba Plant Protection and Quarantine	With requirements for one year	30.09.2030
Ba Technology of Storage and Processing of Agricultural Products	With requirements for one year	30.09.2030

H Decision of the Accreditation Commission (27.06.2025)

Assessment and analysis for the award of the subject-specific ASIIN seal:

The Accreditation Commission discusses the procedure and generally agrees with the recommendation of the expert group and the Technical Committee. However, it is noted that the scope of the original E8 is already included in A3. The Accreditation Commission agrees that this needs to be a requirement but cancels the additional recommendation. The TC further discusses whether the recommendation regarding the quality assurance for teaching in both languages should be a requirement. However, since the university appears to expect that Russian-language courses will no longer be offered in the foreseeable future, a recommendation seems appropriate.

The Accreditation Commission decides to award the following seals:

Degree Programmes	ASIIN Seal	Maximum duration of accreditation
Ba Agronomy	With requirements for one year	30.09.2030
Ba Plant Protection and Quarantine	With requirements for one year	30.09.2030
Ba Technology of Storage and Processing of Agricultural Products	With requirements for one year	30.09.2030

Requirements

For all programmes

A 1. (ASIIN 1.1) Expand the learning outcomes with respect to the dimensions of research and social competences as outlined in the subject-specific criteria.

A 2. (ASIIN 1.1) The learning outcomes need to be formulated in an outcome-based way according to the nature of the concept.

A 3. (ASIIN 1.1/ 1.3/ 4.3) Transparently publish the learning outcomes, curricula, and module handbooks on the programmes´ websites.

A 4. (ASIIN 1.3/ 1.5/ 2) Implement a mandatory Bachelor´s thesis, establish transparent regulations for it, and award credits accordingly.

A 5. (ASIIN 1.3/ 4.1) Revise the module handbook with the scope of:

a) Ensuring completeness and coherence of all information for all modules. The titles need to be harmonised with the module contents.

b) Specifying the learning outcomes and provide clear content descriptions.

c) Concisely outlining all individual modules with singular IDs and titles.

A 6. (ASIIN 1.5/ 5) Transparently evaluate the workload of students.

A 7. (ASIIN 4.2) The Diploma Supplements need to contain the learning outcomes, show the number of credits of the modules, and display statistical data to allow for an assessment of the relative student performance.

A 8. (ASIIN 5) Close the feedback loop and inform students about the results of their feedback.

For BaPQP

A 9. (ASIIN 1.2) The programme name needs to be used consistently in all official documents.

Recommendations

For all programmes

E 1. (ASIIN 1.3) It is recommended to design the modules for a duration of only one semester.

E 2. (ASIIN 1.3) It is recommended to strengthen the general competencies in the curriculum, e.g. in the areas of economics, business administration, and social sciences.

E 3. (ASIIN 1.3/ 3.2) It is recommended to foster English language competency through better integration into the teaching methodology and more extracurricular offers.

E 4. (ASIIN 1.3/ 3.3) It is recommended to foster both incoming and outgoing student mobility.

E 5. (ASIIN 1.4/ 1.5/ 3.2/ 3.3) It is recommended to increase the financial support for contract-based students to decrease the drop-out rates due to financial reasons.

E 6. (ASIIN 1.6/ 1.3) It is recommended to offer a module on research methodology, strengthen project work of the students and encourage critical and controversial discussions as a methodology of scientific work.

E 7. (ASIIN 1.6/ 3.1/ 5) It is recommended to assure the equal quality of teaching in both (Uzbek and Russian) instruction language groups.

E 8. (ASIIN 4.3) It is recommended to increase the information content online, especially for the English version of the website.

Appendix: Programme Learning Outcomes and Curricula

According to the documentation provided on the programme´s website, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Ba Agronomy:

AG1 Analyzes the essence of events and phenomena occurring in Uzbekistan, ideological contradictions, ensures interethnic harmony, religious tolerance, forms thinking, and understands and decides on the essence of state-personal relations.

AG2 Helps them develop their skills, express their opinions in the process of communication, analyze grammatically and apply them in practice.

AG3 Physical education attracts young people to sports and, while popularizing it, can provide comprehensive physical development of the individual, promoting a healthy lifestyle among the future youth.

AG4 Using the laws of higher mathematics, it is be able to digitize, collect, transmit, and control information related to the agricultural sector.

AG5 In soil cultivation, they can study the origin, structure, composition, properties, chemical qualitative and quantitative analysis methods, and apply innovative technologies in farming and soil erosion control.

AG6 Studies and analyzes the use of biological methods in agriculture, the anatomical physiology and morphological structure of plants, and plant species.

AG7 studies the structure and operation of agricultural machinery used in the mechanization of technological processes in agro-industry and the implementation of technological processes in agriculture.

AG8 develops a general professional view of the specialty, has understanding about the types of activities, history and structure of the educational institution, and the role of each of them in the educational process.

AG9 studies and applies advanced technologies for growing fruits and vegetables, creating new varieties and hybrids of agricultural crops, and methods for protecting plants from pests and weeds.

AG10 learns and can apply modern cultivation technologies based on the biology of cotton, field and forage crops, and as a result of the use of non- traditional technologies in the

cultivation of field crops lead to produce high- quality crops, as well as preparation feed for livestock.

AG11 teaches the influence of natural and anthropogenic conditions on the state of soil reclamation and the development of solutions using geographic information systems, the water regime and balance of irrigated lands, and solving problems using the results of scientific achievements.

AG12 Analyzes the development and maintenance of agricultural product standards, certification, regulatory requirements for product quality, and studies and applies innovative and modern technologies for the storage and processing of agricultural products.

AG 13 understands and decides the development, necessity, importance and essence of the state-person relationship of the new edition of the Constitution of the Republic of Uzbekistan.

AG 14 analyzes and conducts ecology and environment protection, how to use land resources, as well as, analyzes and controls physics and agrometeorological experiments, agrometeorological phenomena and the causes of their occurrence.

AG 15 Scientific foundations of livestock nutrition, farms can produce livestock products (milk, meat, eggs, leather, wool), develop sericulture, cultivate high- quality cocoons, introduce nutritious species into existing natural meadows and hayfields, and effectively use pastures.

AG 16 Soil -climatic conditions, according to biological characteristics of plants, farms, organize and apply the correct placement of crops on land, stages of organic farming, organic production, the harm caused to agriculture by weeds, systematic application of farming in regions and areas, preservation and increase of soil fertility, crop rotation and tillage systems on a scientific basis.

AG 17 Identifies problems in the use of modern and water-saving technologies in the irrigation of agricultural crops and applies them in production.

AG 18 Based on the biology of non-traditional field crops, they apply agronomic techniques to adapt them to specific soil and climatic conditions and to produce high yields from oily and technical crops.

AG 19 Optimization production of agricultural economics, intensifies it, determines the level of profit and profitability, establishes and manages agro- clusters, legal frameworks for agribusiness activities

AG 20 forms general cultural, general professional and professional competencies aimed at strengthening and deepening the theoretical preparation of students, mastering their skills and qualifications of qualifying practice reqirements.

AG 21 students are be able to analyze and solve problems in agriculture based on the basic knowledge acquired during their studies in the field of Agronomy (by types of agriculture products).

The following **curriculum** is presented:

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
O'EYTB 1104 (UZB) / NHUB 1104 (ENG) The newest history of Uzbekistan 4 ECTS	DINB 1204 (UZB) / RSB 1204 (ENG) Religious studies 4 ECTS	TPAKB 1308 (UZB) / SSAB 1308 (ENG) Soil science and agrochemistry 4 ECTS	TPAKB 1308 (UZB) / SSAB 1308 (ENG) Soil science and agrochemistry 4 ECTS	FALB 1504 (UZB) / PHB 1504 (ENG) Philosophy 4 ECTS	QXEGSUB 1508 (UZB) / GSSPACB 1508 (ENG) Genetics, selection and seed production of agricultural crops 4 ECTS	OSHB 1712 (UZB) / PSB 1712 (ENG) Plant Science 6 ECTS	OSHB 1712(UZB) / PSB 1712 (ENG) Plant Science 6 ECTS
XJTNB 1108 (UZB) / FLB 1108 (ENG) Foreign language 4 ECTS	XJTNB 1108 (UZB) / FLB 1108 (ENG) Foreign language 4 ECTS	ADHB 1310 (UZB)/ FB 1310 (ENG) Farming 4 ECTS	ADHB 1310 (UZB)/ FB 1310 (ENG) Farming 6 ECTS	QXEGSUB 1508 (UZB)/ GSSPACB 1508 (ENG) Genetics, selection and seed production of agricultural crops 6 ECTS	O'HQB 1508 (UZB)/ PPB 1508 (ENG) Plant protection 4 ECTS	DEYNTB 1706 (UZB) / UTCFCB 1706 (ENG) Unconventional technologies in the cultivation of field crops 6 ECTS	KXMSSB 1804 (UZB) / SCAPB 1804 (ENG) Standardization and certification of agricultural products 4 ECTS
JMSB 1104 (UZB) / PCSB 1104 (ENG) Physical culture and sports 4 ECTS	OMTB 1204 (UZB) / HMB 1204 (ENG) Higher mathematics 4 ECTS	MELYTB 1310 (UZB) / RLDB 1310 (ENG) Reclamation and land development 6 ECTS	MELYTB 1310 (UZB) / RLDB 1310 (ENG) Reclamation and land development 4 ECTS	O'HQB 1508 (UZB) / PPB 1508 (ENG) Protection of plants 4 ECTS	PAXTEB 1508 (UZB) / CSB 1508 (ENG) Cotton Science 4 ECTS	**Elective subjects** MDHTB 2706 (UZB) / RFSB 2706 (ENG) Regional farming systems LALDHB 2706 (UZB) / DFB 2706 (ENG) Dry farming 4 ECTS	QXMSQITB 1806 (UZB) TSPAPB 1806 (ENG) Technology of storage and processing of agricultural products 6 ECTS
ANFKBKB 1104 (UZB) / APBB 1104 (ENG) Analytical, Physcolloid and Biochemistry 4 ECTS	QXAKTB 1204 (UZB) / ICTAB 1204 (ENG) Information and communication technologies in agriculture 4 ECTS	SEASON 1308 (UZB) / FVGB 1308 (ENG) Fruit and vegetable growing 4 ECTS	SEASON 1308 (UZB) / FVGB 1308 (ENG) Fruit and vegetable growing 4 ECTS	PAXTEB 1508 (UZB) / CSB 1508 (ENG) Cotton Science 4 ECTS	YEXYEOTB 1508 (UZB) / FCFPB 1508 (ENG) Forage cultivation and feed preparation 4 ECTS	**Elective subjects** STTB 2706 (UZB) / WSTB 2706 (ENG) Water-saving technologies NEYETB 2706 (UZB) / TNTCCB 2706 (ENG) Technology of non-traditional crop cultivation 6 ECTS	**Elective subjects** MEBYETB 2806 (UZB) / BCTOCB 2806 (ENG) Biology and cultivation technology of oil crops HEALTHB 2806 (UZB) / BCTTCB 2806 (ENG) Biology and cultivation technology of technical crops 6 ECTS

BOFZB 1108 (UZB) / BPPHB 1108 (ENG) Botany and plant physiology 4 ECTS	BOFZB 1108 (UZB) / BPPHB 1108 (ENG) Botany and plant physiology 4 ECTS	QXBTMB 1308 (UZB) ABMB 1308 (ENG) Agricultural biotechnology and microbiology 4 ECTS	QXBTMB 1308 (UZB) ABMB 1308 (ENG) Agricultural biotechnology and microbiology 4 ECTS	YEXYEOTB 1508 (UZB) / FCFPB 1508 (ENG) Forage cultivation and feed preparation 4 ECTS	ESSTB 1510 (UZB) / CIISB 1510 (ENG) Crop irrigation and irrigation systems 6 ECTS		**Elective subjects** QXIMB 2804 (UZB) / AEB 2804 (ENG) Agricultural economy ATEBB 2804 (UZB) OMAB 2804 (ENG) Organization and management of agribusiness 4 ECTS
QXMB 1106 (UZB) / MAB 1106 (ENG) Mechanization of agriculture 6 ECTS	BIOB 1204 (UZB) / BB 1204 (ENG) Biology 4 ECTS	**Elective subjects** YTORKB 2304 (UZB) / NVCRUB 2304 (ENG) The new version of the Constitution of the Republic of Uzbekistan EAMMB 2304 (UZB) / EEPB 2304 (ENG) Ecology and environmental protection FIZAGMB 2304 (UZB) / PHAB 2304 (ENG) Physics and agrometeorology 4 ECTS	**Elective subjects** YASHB 2404 (UZB) / PSB 2404 (ENG) Pasture science EKJB 2404 (UZB) / PCB 2404 (ENG) Placement of crops 4 ECTS	ESSTB 1510 (UZB) / CIISB 1510 (ENG) Crop irrigation and irrigation systems 4 ECTS			
MTKB 1104 (UZB) / ISB 1104 (ENG) Introduction to specialty 4 ECTS	O'OTOSQB 1204 (UZB) U/RLUULFB 1204 (ENG) Uzbek (Russian) language: use of the Uzbek language in the field 4 ECTS	**Elective subjects** CHASB 2304 (UZB) / BAHB 2304 (ENG) Basics of animal husbandry IPTUTB 2304 (UZB) / SMSB 2304 (ENG) Sericulture and Mulberry Science 4 ECTS		**Elective subjects** ORDHB 2504 (UZB) / OFB 2504 (ENG) Organic farming BUUQKB 2504 (UZB) / WCB 2504 (ENG) Weeds and their control 4 ECTS			
	Practices 2 ECTS		Practices 4 ECTS		Practices 8 ECTS	Practices 8 ECTS	Graduation qualification work 4 ECTS
30 ECTS	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**

According to the documentation provided on the programme´s website, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Ba Plant Quarantine and Protection:

PQ1 analyzes the essence of events and phenomena occurring in Uzbekistan, ideological contradictions, ensures interethnic harmony, religious tolerance, forms thinking, and understands and decides on the essence of state-personal relations.

PQ 2 helps them develop their skills, express their opinions in the process of communication, analyze grammatically and apply them in practice.

PQ3 Physical education attracts young people to sports and, while popularizing it, can provide comprehensive physical development of the individual, promoting a healthy lifestyle among the future youth.

PQ4 Using the laws of higher mathematics, It is be able to digitize, collect, transmit, and control information related to the agricultural sector.

PQ 5 In soil cultivation, they can study the origin, structure, composition, properties, chemical qualitative and quantitative analysis methods, and apply innovative technologies in farming and soil erosion control.

PQ 6 uses biological methods in agriculture, studies and analyzes the anatomical physiology and morphological structure of plants, and plant species.

PQ 7 studies the structure and operation of agricultural machinery used in the mechanization of technological processes in agro-industry and the implementation of technological processes in agriculture.

PQ 8 teaches classification of the animal kingdom, systematics of insects and classification, structure, nutrition, reproduction of microorganisms and measures to combat them.

PQ9 Plant science and cotton science: understand and apply technologies to ensure high-quality planting of seeds on flat fields based on the study of the biological and ecological characteristics of field crops and seeds, and the biology of cotton.

PQ10 learns the importance of physiological and biochemical processes in plants in immunological processes in plants and the ways to use them in the fight against diseases and pests and can apply them in society.

PQ11 studies internal and external quarantine pests of agricultural crops grown in our republic, as well as the bioecology of diseases and methods for their detection and elimination.

PQ12 studies advanced technologies for growing fruits and vegetables in field conditions, the use of fruits and vegetables, ways to divide them into groups according to environmental factors and propagation methods, the structure of seeds and seedlings of fruits and vegetables and is able to apply them using the latest scientific achievements in the field.

PQ13 studies the importance, systematics, structure, feeding, development, reproduction, and disease-causing abilities of fungi and fungal organisms and can apply them in society.

PQ14 teaches methods of observing and monitoring increase and spread the pests and diseases of agricultural crops as well as taking into account the amount of pests, and can apply them in practice.

PQ15 analyzes and be able to apply the development and maintenance of standards, the procedure for introducing a standard, its verification, revision and amendments, the economic efficiency of standardization determine the legal basis for technical regulation and their use.

PQ16 studies and applies in practice the bioecological characteristics, distribution, damage, and control measures of agricultural plant pests and diseases.

PQ17 studies the classification of natural enemies of plants against harmful organisms, antagonistic entomopathogenic microorganisms, biological preparations, pesticides, and their methods of application.

PQ18 studies the structure, nutrition, reproduction, distribution, classification, and measures to combat phytopathogenic viruses and bacteria and can apply them in society.

PQ19 learns and applies in society diseases and pests of greenhouse crops, as well as measures to combat them.

PQ20 studies and be able to apply in practice accounting, agribusiness, the organization and management of agroclusters, the procedure for customs clearance of goods and their transport across the customs border.

PQ21 learns pests and diseases of forest and ornamental plants and measures to combat them.

PQ22 studies and applies modern biotechnology experiments in plant protection, the bioecology, distribution, and harm of harmful organisms encountered during the storage of agricultural products.

PQ23 learns the classification of mites, rodents and weeds that cause major damage to agricultural crops, bioecology, morphology and their distribution and harm.

PQ24 learns and can apply in practice the essence of plant quarantine inspections, diagnostic methods, and relevant documentation for imported and exported products during phytosanitary control and certification in plant quarantine.

PQ25 forms general cultural, general professional and professional competencies aimed at strengthening and deepening the theoretical preparation of students, mastering their skills and qualifications of qualifying practice requirements.

PQ26 students are be able to analyze and solve problems in agriculture based on the basic knowledge acquired during their studies in the field of plant quarantine and protection.

The following **curriculum** is presented:

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
O'EYTB1104 / TLHUB1104 The latest history of Uzbekistan 4 ECTS	DINB1204 / RSB1204 Religious studies 4 ECTS	TPAKB2308 / SSAB2308 Soil science and agrochemistry 4 ECTS	TPAKB2308 / SSAB2308 Soil science and agrochemistry 4 ECTS	FALB3504 / PhB3504 Philosophy 4 ECTS		QXMSSB4706 / ACAB4706 Standardization and certification of agricultural products 6 ECTS	O'KHQATB4806 / CPPAB4806 Chemical plant protection and agrotoxicology 6 ECTS
XJTNB1108 / FLB1108 Foreign language 4 ECTS	XJTNB1108 / FLB1108 Foreign language 4 ECTS	UFTMKB2310 / GPhMB2310 General phytopathology and microbiology. 4 ECTS	UFTMKB2310 / GPhMB2310 General phytopathology and microbiology. 6 ECTS	O'KZKB3510 / QPDPB3510 Quarantine pests and diseases of plants 4 ECTS	O'KZKB3510 / QPDPB3510 Quarantine pests and diseases of plants 6 ECTS	QXENTOB4710 / AEB4710 Agricultural entomology 4 ECTS	QXENTOB4710 / AEB4710 Agricultural entomology 6 ECTS
	O'ZRTB1204 / ULB1204 Uzbek (Russian)	DHMELB2308 / FRB2308 Farming and	DHMELB2308 / FRB2308 Farming and	MEVSABB3508 / FVGB3508 Fruit and vegetable	MEVSABB3508 / FVGB3508 Fruit and vegetable	QXFITOB4710 /APhB4710 Agricultural phytopathology	QXFITOB4710 / APhB4710 Agricultural phytopathology

	language 4 ECTS	reclamation 4 ECTS	reclamation 4 ECTS	growing. 4 ECTS	growing 4 ECTS	6 ECTS	4 ECTS
JMSB1102 / PhCSB1102 Physical culture and sports 4 ECTS	QXITTB1204 / ITTAB1204 Innovative techniques and technologies in agriculture 4 ECTS	O'SHPB3308 / PSCGB3308 Plant science and cotton growing 4 ECTS	O'SHPB3308/ PSCGB3308 Plant science and cotton growing 4 ECTS	MIKLB350 / MB350 Mycology 6 ECTS	QXZOROAB1606 / PDAB1606 Predicting the development of agricultural pests 6 ECTS	O'ZBHQB4706 / BPPHO4706 Biological protection of plants from harmful organisms 6 ECTS	O'MKFTEB4806 / PEQPPB4806 Phyto examination in quarantine of plants and products 6 ECTS
OMTB1104 / HMB1104 Higher mathematics. 4 ECTS	QXAKTB1204 / ICTAB1204 Information and communication technologies in agriculture 4 ECTS	O'SIMB2306 / PIB2306 Plant immunity 6 ECTS		AGROBTB2506 / CWB2506 Customs work 6 ECTS	O'KFNDB2606 / PhCDPQB2606 Phytosanitary control and diagnostics in plant quarantine 6 ECTS		KNKB2804 / TNRB2804 Ticks, nematodes and rodents 4 ECTS
ANFKBKB1106 /APhBCB1106 Analytical, physicocolloid and bioorganic chemistry 4 ECTS		YTO'RKB2304 / CRUNEB2304 T.t. The Constitution of the Republic of Uzbekistan in the new edition 4 ECTS	ATEBB2404 / OMAB2404 T.t. Organization and management of agribusiness 4 ECTS	BO'QKCB2506 / WMB2506 Weed control measures 6 ECTS			
BO'FBM1308 / BPPB1308 Botany and plant physiology 4 ECTS	BO'FBM1308 / BPPB1308 Botany and plant physiology 4 ECTS	EAMMB2304 / EEPB2304 Ecology and environmental protection 4 ECTS	O'MO'ENB 2404 EFOB2404 T.t. Entomology of forest and ornamental plants ECTS				
	Practices 2 ECTS		Practices 4 ECTS		Practices 8 ECTS	Practices 8 ECTS	Graduation qualification work 4 ECTS
30 ECTS	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**

According to the documentation provided on the programme´s website, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Ba Technology of storage and processing of agricultural products:

RS 1 understands and decides on the essence of events and phenomena taking place in Uzbekistan, analyzes the content and essence of ideological contradictions, forms thinking, and the nature of state-personal relations.

RS 2 helps them develop their skills, express their opinions in the process of communication, analyze grammatically and apply them in practice.

RS 3 Physical education attracts young people to sports and, while popularizing them, can provide comprehensive physical development of the individual, promoting a healthy lifestyle among the future youth.

RS 4 Develops skills in using computer graphics to create and assemble 3D models using the laws of higher mathematics, and in using the laws of converting electrical energy into other types of energy.

RS 5 Can study the structure, composition, properties, chemical qualitative and quantitative analysis methods of products and apply physiological processes in plants in practice.

RS 6 students have the ability to know features of sensory evaluation of products for storage and processing main criteria and use them.

RS 7 Heat engines, refrigeration units, and heat engineering devices are implemented in mechanized machines, forming skills about their operating principles and their control.

RS 8 learns and can apply in practice the theoretical foundations of land cultivation and storage of grown fruits and vegetables in agriculture.

RS 9 can identify requirements for preserved and processed livestock products, the basis for standardization and certification, and use them

RS 10 study and be able to apply in practice packaging by using modern technologies of agricultural products and storage of packaged products.

RS 11 Technician has the ability to manage modern methods of storing and processing grain and oilseed raw materials, and storage systems from product storage to processing.

RS 12 have the ability to improve equipment and design features of enterprises for drying agricultural products, the design of drying lines has the potential to increase the efficiency of their use.

RS 13 Can apply tasks to organize production in agriculture and further develop entrepreneurship, and implement production for the population.

RS 14 Understands and decides on the significance of the Constitution and the content and essence of the democratic and humanistic principles of the changes made to it, and the nature of the relationship between the state and the person.

RS 15 analyzes ecology and environmental protection, how to use land resources, and conduct biophysical experiments and analyze the reasons for their occurrence.

RS 16 learns and can apply in practice the safety measures for agricultural machinery and fire prevention requirements.

RS 17 have ability how to use renewable energy sources in the processing of agricultural products, and the design and technology of cooling and ventilation devices.

RS 18 acquire skills and qualifications on canning products and preparation of juices beverages and winemaking technology.

RS 19 have skills types of oils, receiving raw materials and preparation oils and fats.

RS 20 consists of developing knowledge and skills in organizing and maintaining methodological foundations of accounting and determining financial results.

RS 21 acquire knowledge and skills in observing and monitoring the reproduction and spread of pests and diseases encountered in the storage of agricultural crops.

RS 22 can understand the basic criteria for the storage and processing technology of potatoes and root vegetables, as well as the technologies used in storage and processing.

RS 23 learns and can apply biotechnological methods and biochemical properties in the storage and processing of agricultural products.

RS 24 Qualifying practice strengthens students' theoretical preparation and forms general professional competencies.

RS 25 have the ability to apply theoretical and practical knowledge acquired during the study of agricultural products storage and processing technology (by product types).

The following **curriculum** is presented:

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
O'EYTB 1104 (UZB) / NHUB 1104 (ENG) The newest history of Uzbekistan 4 ECTS	DINB 1204 (UZB) / RSB 1204 (ENG) Religious studies 4 ECTS	QXMSQIMB2308 (UZB) / MSPAPB 2308 (ENG) Mechanization of storage and processing of agricultural products 4 ECTS	QXMSQIMB2308 (UZB) / MSPAPB 2308 (ENG) Mechanization of storage and processing of agricultural products 4 ECTS	FALB3504 (UZB) / PHB 3504 (ENG) Philosophy 4 ECTS	QXMSSB3508 (UZB) / SCAPB3508 (ENG) Standardization and certification of agricultural products 4 ECTS	QXMSSBB4706 (UZB) / SAQAPB 4706 (ENG) Sensory assessment of the quality of agricultural products 6 ECTS	TEXASDITB 4708 (UZB) / TSPPRMTCB 4708 (ENG) Technology of storage and primary processing of raw materials of technical crops 4 ECTS
XJTNB1108 (UZB) / FLB 1108 (ENG) Foreign language 4 ECTS	XJTNB1108 (UZB) / FLB 1108 (ENG) Foreign language 4 ECTS	ETRASB2308 (UZB) / FEEDB 2308 (ENG) Fundamentals of electrical engineering and digitalization 4 ECTS	ETRASB2308 (UZB) / FEEDB 2308 (ENG) Fundamentals of electrical engineering and digitalization 4 ECTS	SGMSQITB 3506 (UZB) / TSPDMPB 3506 (ENG) Technology of storage and processing of dairy and meat products 6 ECTS	MSSQITB3510 (UZB) / TSPFVB 3510 (ENG) Technology of storage and processing of fruits and vegetables 4 ECTS	TEXASDITB 4708 (UZB) / TSPPRMICB 4708 (ENG) Technology of storage and primary processing of raw materials of industrial crops 4 ECTS	DSQITB4708 (UZB) / TSPGB 4708 (ENG) Technology of Storage and Processing of Grain 4 ECTS
JMSB1102 (UZB) / PHCSB 1102 (ENG) Physical Culture and Sports 4 ECTS	O'OTOSQB 1204 (UZB) / U'RLUULFB 1204 (ENG) Uzbek (Russian) language: use of the Uzbek language in the field 4 ECTS	MEVSABB2308 (UZB) / FVGB 2308 (ENG) Fruit and Vegetable Growing 4 ECTS	MEVSABB2308 (UZB) / FVGB 2308 (ENG) Fruit and Vegetable Growing 4 ECTS	QXMSSB3508 (UZB) / SCAPB 3508 (ENG) Standardization and Certification of Agricultural Products 4 ECTS	QXMSOB3508 (UZB) / WSAPB 3508 (ENG) Warehouses for Storage of Agricultural Products 4 ECTS	DSQITB4708 (UZB) / TGSPB 4708 (ENG) Technology of Grain Storage and Processing 4 ECTS	QXMQIKJLAB 4708 (UZB) / EDFAPPEB 4708 (ENG) Equipment and Design Fundamentals of Agricultural Product Processing Enterprises 4 ECTS
OMTB1104 (UZB) / HMB 1104(ENG) Higher Mathematics 4 ECTS	ANFKBKB1206 (UZB) / APHBCHB 1206 (ENG) Analytical, Physicocolloid and Bioorganic Chemistry 6 ECTS	DHO'SHB2312 (UZB) / FPSB 2312 (ENG) Farming and Plant Science. 6 ECTS	DHO'SHB2312 (UZB) / FPSB 2312 (ENG) Farming and Plant Science. 6 ECTS	MSSQITB3510(UZB) / TSPFVB 3510 (ENG) Technology of storage and processing of fruits and vegetables 6 ECTS	QXMSUKZB 3606 (UZB) / DPSAPB 3606 (ENG) Diseases and pests in the storage of agricultural products MSSHIICHT 3606 (UZB) / TPJBFVB3606 (ENG) Technology of production of juices and beverages from fruits and vegetables 6 ECTS	QXMQIKJLAB 4708 (UZB) / EDPAPPEB 4708 (ENG) Equipment and design principles of agricultural product processing enterprises 4 ECTS	QXMQTTB4804 (UZB) / TDAPB 4804 Technology of drying agricultural products 4 ECTS
BO'FZB1208 (UZB) / BPPHB 1208 (ENG) Botany and Plant Physiology 4 ECTS	BO'FZB1208 (UZB) / BPPHB 1208 (ENG) Botany and Plant Physiology 4 ECTS	BIOFZB 2306 (UZB) / BPHB 2306 (ENG) Biophysics YHQHXB2306 (UZB) / TRTSB 2306 (ENG) Traffic Rules and Traffic Safety 6 ECTS	QXMQIJAB 2404 (UZB) /PAPAPB 2404 (ENG) Processes and Apparatus for Processing Agricultural Products SVQB2404 (UZB) / CVDB 2404 (ENG) Cooling and Ventilation Devices 4 ECTS	QXMSOB3508 (UZB) / WSAPB 3508 (ENG) Warehouses for Storage of Agricultural Products 4 ECTS	KBIBSQITB3604 (UZB) / TSPPPB 3604 (ENG) Technology of Storage and Primary Processing of Potatoes ISDITB3604 (UZB) / TSPPRVB 3604 Technology of Storage and Primary Processing of Root Vegetables 4 ECTS	QXMSQIBTB 4704 (UZB) /BTMSPAPB 4704 (ENG) Biotechnological methods in the storage and processing of agricultural Products QXBTMB4704 (UZB) / ABMB 4704 (ENG) Agricultural biotechnology and microbiology 4 ECTS	QXICHTQTB 4804 (UZB) / OPEAB 4804 (ENG) Organizing of production and entrepreneurship in agriculture 4 ECTS
MTKB1106 (UZB) / ISB 1106 (ENG) Introduction to SPECIALITY 6 ECTS	ITQXIFB1206 (UZB) / HEHUAB 1206 (ENG) Heat engineering and heat use in agriculture 6 ECTS	CHORASB2306 (UZB) / FAHB 2306 (ENG) Fundamentals of animal husbandry QTEMB2306 (UZB) /RESB 2306 (ENG) Renewable energy sources 6 ECTS	YOMTB2404 (UZB) / FOTB 2404 (ENG) Fat and oil technology 4ECTS BHSTB 3506 (UZB) / ATB 3506 (ENG) Accounting and taxation	VINTEXB3506 (UZB) /WTB 3506 (ENG) Winemaking technology 6 ECTS			QXMQB4806 (UZB) / PAPB 4806 (ENG) Packaging of agricultural products 6 ECTS
MXKGB1104 (UZB) / ECGB 1104 (ENG) Engineering and Computer Graphics 4 ECTS							
	Practices 2 ECTS		Practices 4 ECTS		Practices 8 ECTS	Practices 8 ECTS	Graduation qualification work 4 ECTS
30 ECTS	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**	**30 ECTS**