

**MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATIONS
REPUBLIC OF UZBEKISTAN**

**60810700 – Bachelor’s Degree in Technology for the Storage and Processing
of Agricultural Products**

QUALIFICATION REQUIREMENTS

Tashkent – 2024

"60810700 – Bachelor's Degree in Technology for the Storage and Processing of Agricultural Products"

PREPARED AND APPROVED:
Tashkent State Agrarian University.

APPROVED AND IMPLEMENTED:
By the order of the Ministry of Higher Education, Science, and Innovations of the Republic of Uzbekistan dated **25th of June, 2024**, No. 218.

NOTED:
Ministry of Higher Education, Science, and Innovations of the Republic of Uzbekistan.

The above qualification requirements meet the "State Education Standards of Higher Education." They are in accordance with the "State Education Standards," the "Classification of Higher Education Fields and Specialties," and the relevant national and sectoral qualification frameworks, professional standards, and competency requirements.

The right to officially publish the qualification requirements in the Republic of Uzbekistan belongs to the Ministry of Higher Education, Science, and Innovations of the Republic of Uzbekistan.

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1. General Description

60810700 – The bachelor's degree in Technology for the Storage and Processing of Agricultural Products is designed to prepare specialists in this field for a duration of 4 years.

1.1. Scope of Application

1.1.1. Description of Qualification Requirements

The qualification requirements for the bachelor's degree in Technology for the Storage and Processing of Agricultural Products (60810700) encompass all necessary educational components for this degree.

1.1.2. Main users of Qualification Requirements:

The program aims to equip students with the necessary knowledge and skills to successfully engage in agricultural product processing and storage, addressing the needs of the industry and society. It includes practical training and theoretical knowledge related to agricultural products, as well as the application of innovative technologies in this field.

1.2. Description of Professional Activities

1.2.1. Areas of Professional Activity:

The areas of professional activity for graduates include:

"Agriculture, horticulture, fishery, and veterinary science," which encompasses the processing of agricultural products, fruits and vegetables, cereals, and fish products, as well as the use of spirits and alcohol in processing.

Graduates will be involved in the innovation of technologies for the storage and processing of agricultural products, ensuring quality control and compliance with safety standards.

They will also work in state organizations responsible for accreditation and quality control, as well as in institutions that provide training for future specialists in higher education.

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Identification, innovation in the quality systems of agricultural products, marketing, and the supply of food products are key areas;

agricultural enterprises, organizations, and farmer activities in the agricultural sector are involved in the management and organization of work, ensuring compliance with operational goals;
scientific issues and the conceptual and theoretical models of tasks are addressed through scientific research and the application of scientific methods.

60810700 – The bachelor's degree in Technology for the Storage and Processing of Agricultural Products encompasses educational components for graduates, with a focus on pedagogical preparation from a professional standpoint, including:

1.2.3. Types of Professional Activities:

- Scientific research activities;
- Organizational management activities;
- Educational and training activities;
- Processing and service activities;
- Consulting activities;
- Engineering and technological management activities.

1.2.4. Professional Responsibilities

60810700 – The bachelor's degree in Technology for the Storage and Processing of Agricultural Products requires graduates to perform professional activities in various fields, ensuring the fulfillment of the following responsibilities:

Scientific Research Activities:

- Conducting scientific research in institutions and centers, applying modern methods in the fields of agricultural product processing;
- Engaging in scientific research activities related to agricultural product processing in foreign countries and specialized institutions;
- Collaborating with foreign universities and technical institutions on scientific research and technological innovations;
- Participating in international projects and programs related to agricultural research and technology.

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Utilizing labor efficiency effectively, planning the use of labor resources, and designing the quality management system:

- Organizing the work of the first-level processing workers and managing them;
- Monitoring the operational activities to ensure compliance with the established operational goals and assessing the results of the implemented activities;
- Addressing issues related to the organization of production processes and evaluating the economic efficiency of the resulting products;
- Utilizing modern information technologies in processing, managing processing operations, and monitoring the quality of products;
- Protecting the environment in accordance with labor safety requirements during the processing operations;
- Planning the utilization of resources and analyzing the risks associated with the production process;
- Evaluating the potential risks of the production process and identifying ways to mitigate them;

In Educational and Training Activities:

- Organizing the acceptance of production orders and managing the external and internal environmental factors affecting the production process;
- Preparing the necessary documentation for the production process and ensuring compliance with quality standards;
- Developing various educational programs to create a knowledge base for the staff;
- Evaluating the effectiveness of educational programs;
- Organizing the management of production decisions and assessing their effectiveness;

In Processing and Service Activities:

- Organizing the processing activities at the engineering and technological level;
- Utilizing standards in processing operations and ensuring compliance with them;
- Implementing automation systems in processing activities;
- Organizing the management of production processes and ensuring their effectiveness;
- Assessing the effectiveness of production decisions and their impact on the overall performance;

In Consulting Activities:

- Organizing the consulting services for the certification of products and the management of quality systems;
- Evaluating the effectiveness of consulting activities in various fields;
- Planning the implementation of consulting services and assessing their effectiveness;

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2. Requirements for Professional Competencies:

- Knowledge of the major issues of state policy, understanding socio-economic problems, and being able to analyze them effectively;
- Ability to express thoughts, ideas, arguments, and conclusions clearly and logically in written and oral forms, as well as to communicate effectively with stakeholders;
- Ability to assess the professional experience gained and apply it to enhance professional development;
- Understanding the principles of modern information technologies and their application in professional activities;
- Ability to prepare reports, presentations, and other documents related to professional activities;
- Knowledge of corporate information systems, ability to analyze financial and economic data;
- Ability to assess the safety of food products and ensure compliance with relevant regulations;
- Understanding the technological processes of storage and processing of agricultural products;
- Ability to organize resources effectively in production activities;
- Ability to conduct scientific research and apply theoretical knowledge to practical tasks;
- Ability to provide consulting services and develop recommendations based on scientific research.

3. Requirements for Practises:

Ability to apply theoretical knowledge in practice, particularly in specialized fields; Ability to work effectively in teams and communicate with various stakeholders; Ability to manage production processes and evaluate their effectiveness; Ability to analyze and solve complex problems related to the processing and storage of agricultural products;

- Ability to implement modern technologies in production processes;
- Ability to ensure compliance with safety and quality standards in production activities;
- Ability to organize and manage projects effectively.

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4. Structure of the Course Catalog:

No.	Course Code	Course Titles, Blocks, and Activities	Total Credit Hours	Credits	Semester
1.00	General Mandatory Courses	4920	164		
1.01	O'EYTB1104	History of Uzbekistan	120	4	1
1.02	DINB1204	Philosophy	120	2	2
1.03	FALB1304	Philosophy	120	4	3
1.04	XJTNB1208	Foreign Language	240	8	1,2
1.05	O'TO'SQB1204	Uzbek (Russian) Language	120	4	1
1.06	JMSB1104	Physical Education and Sports	120	4	1
1.07	ENMSB1104	Ethnology and Mathematical Statistics	120	4	1
1.08	ANFKBK1206	Analytical, Physical-Chemical, and Biochemical	180	6	2
1.09	BO'FZB1208	Botany and Plant Physiology	240	8	1,2
1.10	MTKB1106	Introduction to Specialization	180	6	1
1.11	MHKGB1104	Computer Graphics	120	4	1
1.12	O'TB1206	Organic Chemistry and Analysis	180	6	2
1.13	ETRASB13408	Electrical Engineering Fundamentals	240	8	3,4
1.14	MKBB1506	Microbiology	180	5	5
1.15	MTB1506	Engineering Thermodynamics	180	6	5
1.16	YI1504	Environmental	120	4	1

No.	Course Code	Course Titles, Blocks, and Activities	Total Credit Hours	Credits	Semester
		Economics			
1.17	QXMSB15608	Standards and Certifications of Agricultural Products	240	8	5,6
1.18	ATJB1706	Basic Technological Processes and Equipment	180	6	7
1.19	AGBAB1706	Fundamentals of Agribusiness	180	6	7
1.20	EAMMB1706	Ecology and Environmental Protection	180	6	7

Courses related to the storage and processing of fruits and vegetables:

No.	Course Code	Course Titles	Total Credit Hours	Credits	Semester
1.21	MSB13408	Fruit and Vegetable Processing	240	8	3,4
1.22	QXMQTB13408	Technologies for Processing Agricultural Products	240	8	3,4
1.23	BSEMIBSB15608	Processing of Fruits and Vegetables	240	8	5,6
1.24	MSQITB15610	Technologies for Processing Fruits and Vegetables	240	8	5,6
1.25	OOMSB15610	Sensor Technology for Agricultural Products	240	8	5,6
1.26	QIKJLAB1706	Storage of Agricultural Products	240	8	5,6
1.27	OOMQMB1706	Agricultural Materials	240	8	5,6

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Qualification: Engineer-Technologist (in the field of storage and processing technologies of fruits and vegetables)

Mandatory Courses for the Storage and Processing of Fruits and Vegetables:

No.	Course Code	Course Titles	Total Credit Hours	Credits	Semester
1.21	O'SIMB13408	Plant Physiology	240	8	3.4
1.22	DSQITB13408	Technology of Storage	240	8	3.4
1.23	DTEMQOMB15608	Technology of Fruits and Vegetables Processing	240	8	5.6
1.24	TEXASQITB15608	Technology of Equipment for Storage	240	8	5.6
1.25	QIKJLAB1606	Equipment for Processing	240	8	5.6
1.26	DTEMSB1706	Technology of Storage and Processing	180	6	7
1.27	QXMQITEFM1704	Use of Energy Sources in Processing	180	6	7
2.00	Elective Courses	960	32	3.4, 6	
2.00	Elective Courses	960	32	3.4, 6	

Qualification: Engineer-Technologist (in the field of technology for processing alcoholic beverages)

No.	Course Code	Course Titles	Total Credit Hours	Credits	Semester
1.21	AMB13408	Wine Technology	240	8	3.4

No.	Course Code	Course Titles	Total Credit Hours	Credits	Semester
1.22	SKJLAB13408	Equipment for Wine Production	240	8	3.4
1.23	IESMTB15608	Technology of Alcoholic Beverages	240	8	5.6
1.24	VTB15610	Winemaking Technology	240	8	5.6
1.25	SPATIT1606	Beer Technology	240	8	5.6
1.26	QICHITB1706	Technology of Distilling	240	8	5.6
2.00	Elective Courses	960	32	3.4, 6	
2.00	Elective Courses	960	32	3.4, 6	

Total Credits:

- **Total Mandatory Courses:** 5880 | 196
- **Practical Training:** 1320 | 44 | 2, 4, 6, 8
- **Final State Examination:** 1320 | 44
- **Total:** 7200 | 240

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Bibliographic Information

UDK 002: 651.1/7

Group T 55

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Key words:

Type of professional activity, Competency, Educational direction, Type of professional activity, Professional activity object, Professional activity subject
Credit, Module, Bachelor's degree, Educational practice, Final qualification work
Review Internal audit, State audit, State educational standards, National accreditation
Educational process, Educational quality audit, Profile Assessment, Educational trajectory, Republic of Uzbekistan Ministry of Agriculture Ministry of Higher and Secondary Specialized Education State Committee for Standards and Technical Regulations Educational institutions Agricultural products, Physical and chemical properties, Metrology, Agricultural equipment, Microorganisms, Identification, agricultural enterprises, organizations.

