CATALOG OF ELECTIVE DISCIPLINES

6B07 - Engineering, Manufacturing and Civil engineering
(Code and classification of the field of education)

6B072 - Manufacturing and processing
(Code and classification of the direction of training)

0720
(Code in the International Standard Classification of Education)

B068 - Food production
(Code and classification of the educational program group)

6B07202 - Technology of Food Products
(Code and name of the educational program)

bachelor
(Level of preparation)

set of 2023

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Developed
By the Academic Committee of the OP
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Reviewed
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Faculty of Engineering and Technology
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Chairman of the Commission on Quality Assurance Abdilova G.B.

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At the meeting of the Academic Council of the University
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Chairman of the Academic Council Oralkanova I. A.

General technology of processing industries

Discipline cycle	Basic disciplines
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline
During the training, students study general processes, modern methods, methods of processing raw materials. Thermal, mass transfer, microbiological processes, the theory of building a technological flow at grain processing enterprises are studied. Familiarization with the requirements for raw materials, acceptance and storage. Innovations at processing enterprises, technologies are considered, the possibilities of their application in pasta, confectionery, bakery, cereals, flour mills, starch, yeast, food concentrates are mastered

Purpose of studying of the discipline
Study of the technology of processing industries, familiarization with the requirements for raw materials and finished products

Learning Outcomes
ON5 To apply knowledge of general methods of exposure to raw materials in professional activities

Learning outcomes by discipline
1) To use raw materials of plant and animal origin in the development of formulations of new food products, to evaluate the quality of new products;
2) To build technological schemes for processing and storage facilities of processing enterprises, to develop and make certain adjustments to technological schemes of processing industries, to choose the modes of the main te3) 3) To evaluate the efficiency of technological production lines of processing industrieschnological processes;

Prerequisites
Educational practice Introduction to the technology of food productions Technological bases of physiology, hygiene and sanitation of nutrition

Postrequisites
Physical methods of food processing Grain science with the basics of crop production

General technology of food production

Discipline cycle	Basic disciplines
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline
Attracting students to active learning will allow them to master the types of plant and animal raw materials, its classification in this course. The main technological operations (mechanical, thermal, physical, chemical, microbiological), food production technologies with the latest operations and cycles are considered. The study of requirements for harvested raw materials, new product ranges of food products, technological modes and parameters, control processes at the enterprise, its cyclicity, requirements and conformity of products to GOST, technical specifications.

Purpose of studying of the discipline
The purpose of studying the discipline "General technology of food production" is to give an idea of the general technology of food production, the chemical composition, the nutritional and biological value of food products, the processes occurring during the storage of food products, their production technology.

Learning Outcomes
ON5 To apply knowledge of general methods of exposure to raw materials in professional activities

Learning outcomes by discipline
1) Assesses the physical and chemical parameters of food productsts
2) Selects methods of technochemical quality control of raw materials, semi-finished products and finished products
3) Determines the properties of raw materials and semi-finished products that affect the optimization of technological processes and the quality of finished products

Prerequisites
Educational practice Introduction to the technology of food productions Technological bases of physiology, hygiene and sanitation of nutrition

Postrequisites
Physical methods of food processing Grain science with the basics of crop production

Commodity research of grain products

Discipline cycle	Basic disciplines
Course	2
Credits count	3
Knowledge control form	Examination

Short description of discipline
The course examines the basics and methods of commodity science, nutritional value, chemical composition, consumer properties, classification characteristics of goods. Grain goods, storage conditions, assortment composition, rules for conducting commodity evaluation of grain products using innovative technologies and techniques, storage of grain-scientific goods, modes and storage periods, organization of quality control and evaluation of grain-scientific goods according to organoleptic and physico-chemical indicators are studied.

Purpose of studying of the discipline
formation of theoretical knowledge among future specialists in the field of consumer properties of goods and raw materials, production technology, commodity science, examination of the quality of grain products, assortment, basics of storage, transportation and sale, and

practical skills in the organization of product quality control at all stages of commodity movement.

Learning Outcomes

ON6 To ensure the production of high-quality food products in accordance with the requirements of regulatory docu-ments and modern nutrition science

Learning outcomes by discipline

1) To classify the assortment, commodity characteristics, quality requirements, packaging, transportation and sale, storage conditions and terms of the main groups of non-scientific goods;
2) To evaluate the conditions and ability to organize the storage of food products and stocks, taking into account the requirements of the system of analysis, evaluation of their quality;
3) To conduct a commodity evaluation of the quality of food raw materials

Prerequisites

Introduction to the technology of food productions Technological bases of physiology, hygiene and sanitation of nutrition

Postrequisites

Technology of flour production

Commodity research of food products

Discipline cycle	Basic disciplines
Course	2
Credits count	3
Knowledge control form	Examination

Short description of discipline

The discipline is aimed at familiarization with the basics of commodity science, the study of chemical composition, assortment composition, consumer advantages of food products, storage, classification; organization and conduct of commodity evaluation of food products based on the use of modern methods. With the use of active teaching methods, the student gets acquainted with the modern storage of food products, with the methods of control of food products during storage, during acceptance in warehouses, during the sale of products, during transportation

Purpose of studying of the discipline

Mastering of theoretical knowledge by students, acquisition of skills and abilities in the field of formation of consumer properties, product range and quality of food products necessary for professional activity

Learning Outcomes

ON6 To ensure the production of high-quality food products in accordance with the requirements of regulatory docu-ments and modern nutrition science

Learning outcomes by discipline

1) To recognize the range of food products by their external distinguishing features, methods of storage, sale, transportation, use of packaging materials;
2) To use food products taking into account the requirements of modern trends in production, use and consumption;
3) To determine the quality of raw materials and finished products, implement the interchangeability of food products, apply regulatory documentation

Prerequisites

Introduction to the technology of food productions Technological bases of physiology, hygiene and sanitation of nutrition

Postrequisites

Butter and cheese technology

Grain science with the basics of crop production

Discipline cycle	Basic disciplines
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline examines the modern development of grain farming in Kazakhstan and foreign countries. The student studies the types of grain raw materials, classification according to various characteristics, the study of the chemical composition of grain crops, morphology and anatomy of grain crops, technological properties of grain crops, qualitative indicators, physical properties of grain crops (nature, clogging, aerodynamic parameters, clogging of grain, boreholness, density, size, alignment, electrophysical properties), characteristics types of cereals.

Purpose of studying of the discipline

Familiarization with the main physical and chemical factors, parameters of technological processes and operations affecting the quality of grain and grain crops.

Learning Outcomes

ON5 To apply knowledge of general methods of exposure to raw materials in professional activities

Learning outcomes by discipline

1) To classify the physical and chemical factors affecting the quality of grain and grain crops, as well as the quality of the harvest;
2) To evaluate the parameters of technological processes and operations during grain processing and storage that affect the quality of grain crops;
3) To identify anatomical features and chemical composition of cereals, legumes, oilseeds and root crops, structural-mechanical, power, friction, thermophysical, electrophysical, hygroscopic properties of agricultural plant products;

Prerequisites

Physics

Postrequisites

Technology of elevator industry

Physical methods of food processing

Discipline cycle	Basic disciplines
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline
This course involves the study of classification of physical processing methods, modern application in food technology, practical application in production conditions.
The application of optical methods, telecommunication methods, electroplasmolysis, high-frequency methods, acoustic methods, food processing with alternating current, electroplasmolysis, the use of infrared radiation, radioactive radiation treatment are considered. The course studies the influence of physical methods on the change of organoleptic, physico-chemical parameters.

Purpose of studying of the discipline
Study of physical methods of processing raw materials, application of modern processing methods at food industry enterprises

Learning Outcomes
ON5 To apply knowledge of general methods of exposure to raw materials in professional activities

Learning outcomes by discipline
1) To apply progressive physical methods in food production technology;
2) To determine electro-physical, structural-mechanical, optical, acoustic characteristics of food products and establish qualitative and quantitative interrelation between them;
3) To perform engineering calculations of processes and select appropriate equipment.

Prerequisites
Physics

Postrequisites
Sausage production technology

Technology of macaroni industry

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline
In the course of the discipline, the pasta properties of flour, raw materials of pasta production, the use of automated lines of various capacities for the manufacture of pasta are studied.
Promotes the expansion of knowledge in the field of the current state of pasta production, the study of issues of modern classification of products, the possibility of using modern technological processes of pasta production (acceptance and preparation of raw materials, dough kneading, pressing, drying, stabilization, storage).

Purpose of studying of the discipline
To gain knowledge on pasta technology; modern methods of researching
the quality of raw materials and finished products; methods of mathematical modeling and optimization of technological processes that ensure a high yield of finished products and its best quality.

Learning Outcomes
ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline
1) To apply the latest scientific and practical achievements in the pasta industry, analyze the main properties of raw materials that affect the quality of finished products, resource conservation and reliability of technological processes;
2) To control technological processes that ensure high yield of finished products and its best quality;
3) To develop technologies, calculate pasta recipes, draw up regulatory and technical documentation for the production of new food products.

Prerequisites
General technology of processing industries

Postrequisites
Final examination

Technology of public catering products production

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline
The discipline examines the classification of public catering dishes by species composition, method of culinary processing, technological properties of raw materials, studies the types of heat treatment used for the preparation of first, second courses, snacks, sweet products, beverages, rules of cooking, assortment of dishes from cottage cheese, legumes, vegetables, meat and fish products, flour products, egg products, formation of taste properties of products

Purpose of studying of the discipline
To master the theoretical foundations of the technology of production of public catering and special purpose products, the practical application of knowledge in the production process.

Learning Outcomes
ON7 To organize the technological process of production at the enterprises of the food industry

ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To draw up a technical and technological map of the preparation of a dish, calculate the main raw materials, make a calculation of the dish, a technological scheme, calculate the nutritional and energy value of the dish;
2) To organize the technological flow of the production of public catering dishes;
3) To distinguish the main technological processes used for cooking (mechanical, thermal), the main technological equipment used for the production of public catering dishes.

Prerequisites

General technology of food production

Postrequisites

Final examination

Technology of grouts industry

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline examines the issues of the assortment composition of cereals, the construction of technological flow at a modern cereal factory, factors contributing to the improvement of technological operations of the cereal factory, the peculiarities of obtaining cereal products, physical, chemical properties, biological, energy, nutritional value of cereals, product quality indicators according to the standard, technological operations of cereal production - acceptance, purification of raw materials, hydrothermal treatment, peeling, sorting, grinding, polishing, packaging, storage, fast-growing cereals.

Purpose of studying of the discipline

Prepare students to actively master the technology of cereal production.

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To analyze the production technology and organization of technological processes of cereal production on automated production lines;
2) To use regulatory and technical documentation, regulations, norms and rules in the production process;
3) To use raw materials rationally, to make basic technological calculations

Prerequisites

General technology of processing industries Commodity research of grain products

Postrequisites

Final examination

Technology of whole milk production

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The course examines the characteristics of whole milk, basic fat content, physico-chemical properties. The technologies of production of drinking milk, creamy drinks, characteristics of types, assortment line, indicators according to standard, general technological modes of production of fermented milk drinks, types of starter cultures, the use of lactic acid starter cultures, preparation of starter cultures, current trends in the production of cottage cheese, cottage cheese products, semi-finished products, the range of sour cream and its production technology, frozen, ice cream technology, the quality of finished products.

Purpose of studying of the discipline

To master the theoretical foundations of the technology of whole milk products, the practical application of knowledge in the production process.

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To determine the range of products, raw materials for the production of whole-milk products, quality requirements for raw materials for the production of whole-milk products;
2) To develop technological schemes for the production of whole-milk products, read technological schemes, calculate recipes for whole-milk products, evaluate the quality of finished products;
3) To solve technological problems, compare technological equipment for the production of whole-milk products.

Prerequisites

Commodity research of food products General technology of food production

Postrequisites

Final examination

Technological equipment of meat, dairy industry and public catering enterprises

Discipline cycle	Basic disciplines
Course	3
Credits count	5

Knowledge control form	Examination

Short description of discipline
The course examines the classification of equipment of meat, dairy and catering enterprises, equipment for the purpose of technological processes (mechanical, thermal, microbiological), the use of technological devices for separation, liquids, storage of raw materials, grinding, mixing, molding, slicing, pasteurization and sterilization devices, various types of culinary processing, packaging devices. Study of modern equipment catalogs, carrying out technological calculations of equipment, study of safety rules when working on equipment

Purpose of studying of the discipline
Preparation of students for production and technical, design and research activities related to the operation of technological equipment of the meat, dairy industry and
catering enterprises

Learning Outcomes
ON3 To show general engineering training in mastering the basics of technical and professional skills

Learning outcomes by discipline
1) To master new types of technological equipment when changing the schemes of technological processes in the production of meat, dairy products and catering products;
2) To operate various types of technological equipment in accordance with the safety requirements at food enterprises;
3) To carry out engineering calculations of technological equipment, to carry out justifications of hardware design of technological operations with the achievement of required results;

Prerequisites
Engineering Graphics

Postrequisites
Designing of enterprises of the meat, dairy industry and public catering

Technological equipment of the baking, macaroni and confectionery industry

Discipline cycle	Basic disciplines
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline
The course of the discipline studies general-purpose equipment, equipment of the pasta, bakery, confectionery industry, the principle of operation of the equipment for the purpose of technological processes - the processes of mixing, whipping, storage, slicing, grinding, pressing, heat treatment, fermentation, packing, characteristics of the equipment, (performance, overall dimensions), equipment brands, technical indicators of the equipment, operation of equipment in production, engineering calculations, compliance with safety regulations in production, the use of modern catalogs of equipment for calculations.

Purpose of studying of the discipline
Preparation of students for production and technical, design and research activities related to the operation of technological equipment of the bakery, pasta and confectionery industry

Learning Outcomes
ON3 To show general engineering training in mastering the basics of technical and professional skills

Learning outcomes by discipline
1) To apply technological equipment for the production of food from vegetable raw materials, modern methods of operation of machines and apparatuses for advanced technological processes;
2) To solve engineering problems related to the operation of technological equipment in the industry;
3) To justify and implement technological layouts, selection of equipment for technological lines and production sites of bread, confectionery and pasta

Prerequisites
Engineering Graphics

Postrequisites
Designing of the enterprises of the baking, macaroni and confectionery industry

Sausage production technology

Discipline cycle	Profiling discipline
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline
The discipline examines the modern classification of sausage products according to various parametric characteristics, requirements for the main and auxiliary materials of sausage production, innovative technologies of sausage products and smoked meats, general technological processes and private sausage technology are studied, processes of butchering, mechanical processing, salting of raw materials, ripening of minced meat, heat treatment of sausage products, installation of automated lines of various capacities are considered for the manufacture of sausages, quality.

Purpose of studying of the discipline
To master the theoretical foundations of sausage production technology, the practical application of knowledge in the production process.

Learning Outcomes
ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline
1) To carry out technological operations of sausage production, perform technological calculations of sausage production;
2) To determine the quality of products, product defects and develop measures to eliminate defects;

3) To classify raw materials of sausage production, recognize technological equipment of sausage production according to the principle of operation and purpose

Prerequisites

Physical methods of food processing Commodity research of food products General technology of food production

Postrequisites

Final examination

Technology of elevator industry

Discipline cycle	Profiling discipline
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

The course deals with the issues of grain storage, the classification of granaries, modern requirements for granaries, the construction of an elevator network at enterprises of various productivity. The issues of technological regimes for the storage and processing of grain masses, grain products are studied, the properties and parameters of the bulk grain mass are studied, the classification of granaries, types of elevators, technological processes of the elevator industry, types of technological equipment of the elevator industry, storage modes of grain and grain products.

Purpose of studying of the discipline

Mastering by students – future specialists of the basics of the science of granaries and their operation, taking into account best practices.

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To name the technological characteristics of raw materials intended for storage at the elevator, classify the technological equipment of the elevator industry;
2) To list the technological operations of the elevator industry, the organization of the technological flow at the elevator, the types of technological equipment used for the organization of the elevator economy;
3) To use methods for assessing the quality of raw materials during storage, methods for monitoring the operating modes of machines and equipment.

Prerequisites

General technology of processing industries Grain science with the basics of crop production Commodity research of grain products

Postrequisites

Modern technologies of storage of meat, dairy products and public catering

Discipline cycle	Basic disciplines
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline studies the issues of rational storage of food products in the conditions of the warehouse economy of the enterprise, transportation, when sold in retail premises. Factors contributing to the safety of finished products, temperature and humidity conditions, storage methods, modern packaging materials, changes occurring during storage are considered. The characteristics of food products during storage, laboratory studies of determining the quality of products during storage, types of premises that are intended for storing food products are studied.

Purpose of studying of the discipline

To master modern technologies for the storage of food products, to study measures that increase the shelf life of finished products

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To name the physico-chemical, biochemical processes occurring during food storage; methods and methods of food storage;
2) To determine the quality of food products by laboratory methods; to organize the rational storage of food products; to calculate the natural loss of food products during storage;
3) To use different ways and methods of food storage.

Prerequisites

Physical methods of food processing Commodity research of food products General technology of food production

Postrequisites

Final examination

Modern technologies of storage of bakery, pasta, confectionery products

Discipline cycle	Basic disciplines
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

This course is designed to study the issues of optimal storage of bakery, pasta, confectionery products, the biochemical, physical, colloidal processes occurring during storage, factors affecting the storage process, modern methods and methods of storage, the use of

special regimes, ingredients that allow to extend the shelf life of products are studied. The course deals with issues of storage at the enterprise, during transportation, sale, quality standards, regulatory documents during transportation, storage.

Purpose of studying of the discipline

To acquire knowledge in the field of modern technologies for storing bakery, pasta, confectionery products

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To name methods and methods of storage of finished products, types of packaging materials, storage modes;
2) To manage the existing storage processes of bread, confectionery and pasta production, ensuring high quality products that meet the requirements of regulatory documentation;
3) To apply an effective quality control system of raw materials, semi-finished products and finished products based on standard test methods and relevant regulatory documents .

Prerequisites

General technology of processing industries Grain science with the basics of crop production Commodity research of grain products

Postrequisites

Final examination

Technology of flour production

Discipline cycle	Profiling discipline
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

In this discipline, students study new technologies of flour production, prospects for the development of flour production, modern classification of flour, issues of general properties of grain for flour production, consider the processes of preparing grain for grinding (separation, hydrothermal processing of grain, the formation of grinding batches), the processes of grinding, flour production, intermediate products. characteristics, technology of flour from various cereals.

Purpose of studying of the discipline

Preparing students to actively master the technology of milling enterprises

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

- to study the range of flour milling products, its quality; technological properties of raw materials; theories of basic technological processes;
- learn how to make technological schemes of flour production; choose the modes of the main technological processes;
- to study the technological processes of flour milling;
- determine the technological efficiency of individual processes;
- perform analyses to assess the quality of finished products;
1) To calculate the composition of the grinding mixture, make up the quantitative balance of the preparatory department of the flour mill, analyze the yield of flour;
2) To evaluate the quality of finished products in accordance with the requirements of regulatory documents;
3) To evaluate the technological processes of flour milling, describe the technological equipment used for flour milling

Prerequisites

General technology of processing industries Grain science with the basics of crop production Commodity research of grain products

Postrequisites

Final examination

Butter and cheese technology

Discipline cycle	Profiling discipline
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline studies the modern classification of cheeses, the cheese suitability of milk, the processes of acceptance and processing of dairy raw materials in the manufacture of cheese. In the process of studying the discipline, the processes of cheese production will be determined, cheese technologies will be studied according to the classification, students will get acquainted with the defects of cheeses. They get acquainted with the modern classification, the assortment composition of butter, its production by 2 methods - churning and converting high-fat cream, oil technology with fillers, oil defects.

Purpose of studying of the discipline

To master the theoretical foundations of butter and cheese production technology, the practical application of knowledge in the production process.

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To distinguish the requirements for raw materials for the production of butter and cheese, name the main technological processes for the production of butter and cheese;
2) To perform basic technological calculations for the output of butter and cheese;

3) To draw conclusions on the control of requirements for the technological process of butter and cheese production in accordance with regulatory and technological documentation.

Prerequisites

Physical methods of food processing Commodity research of food products General technology of food production

Postrequisites

Final examination

Control and assessment of the quality of raw materials and food products

Discipline cycle	Basic disciplines
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline studies the quality of meat, dairy products, catering products, flour, starch, sugar, confectionery, bakery, confectionery, wine and vodka products, yeast, soft drinks. The student in the course of laboratory work determines the salt content, pH, acidity, alkalinity, basic nutritional nutrients (proteins, fats, carbohydrates, ash, dry substances). The application of an integrated approach is designed to study the normalized indicators of food quality by qualimetric methods. The course introduces modern devices.

Purpose of studying of the discipline

To familiarize students with the knowledge and instill in the organization verify that the quality of incoming raw materials, manufactured products to the established requirements of NTD, recipes and technological modes of production.

Learning Outcomes

ON6 To ensure the production of high-quality food products in accordance with the requirements of regulatory docu-ments and modern nutrition science

Learning outcomes by discipline

1) To classify methods for determining food quality indicators;
2) To use methods of food quality research in laboratory and production practice;
3) To control the quality and safety of agricultural raw materials and products of its processing

Prerequisites

Commodity research of food products Commodity research of grain products

Postrequisites

Final examination

Technochemical control of processing industries

Discipline cycle	Basic disciplines
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

When mastering the discipline, the application of standards for the methods of research of finished products and raw materials, sensory, organoleptic, chemical, physical, microbiological techniques, analysis and evaluation of the results of the study of the quality of cereals, cereals, bakery, pasta, confectionery, alcoholic and non-alcoholic beverages, yeast, malt, etc. are studied. The issues of using innovative methods of quality control of products of processing industries are considered.

Purpose of studying of the discipline

To provide students with the necessary knowledge on the organization and conduct of technochemical control at processing plants, in production and technological laboratories.

Learning Outcomes

ON6 To ensure the production of high-quality food products in accordance with the requirements of regulatory docu-ments and modern nutrition science

Learning outcomes by discipline

1) To identify the correctness of technological operations at all stages of the technological process;
2) To organize the work of production and technical laboratories, maintain documentation on quantitative and qualitative accounting of raw materials and finished products, apply modern methods of product quality research;
3) To analyze the results of laboratory analysis of raw materials, finished products, draw conclusions about the quality of finished products, raw materials, semi - finished products

Prerequisites

Commodity research of food products Commodity research of grain products

Postrequisites

Final examination

Technology of canned meat and fish production

Discipline cycle	Profiling discipline
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

This discipline studies the role of canned food in human nutrition, nutritional value, classification of canned meat and fish, raw materials and canned packaging, theoretical foundations of canning, modern methods and methods of canning, modern modes and stages of production of canned meat and fish (preparation of raw materials, pre-cooking, portioning, packaging, sterilization process, storage of canned food), the requirements for packaging, chemical, microbiological, mechanical bombing of products are being studied.

Purpose of studying of the discipline
Students gain knowledge about the technology of canning canned meat and fish, study the main production processes and the formula for sterilizing canned food.
Learning Outcomes
ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry
Learning outcomes by discipline
1) To determine the main and auxiliary raw materials of canning production, processes of production of canned meat and fish, formulas for sterilization of canned meat and fish, to make technological schemes of production;
2) To evaluate the quality of canned meat and fish by laboratory methods; to calculate the recipe of canned food, the nutritional and biological value of food;
3) To develop rational technological conditions, to identify disadvantages of canning production.
Prerequisites
Physical methods of food processing Commodity research of food products General technology of food production
Postrequisites
Final examination

Technology of breadmaking

Discipline cycle	Profiling discipline
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline
The discipline provides for obtaining knowledge and studying the development of bakery production in Kazakhstan and its role in the food cluster, types of raw materials of bakery production, studying the processes of bakery production (preparation of ingredients, kneading, fermentation, dough forming, vystoyka, baking, cooling, storage), compounding, studying defects and diseases of bread, technology of certain types of products, requirements for bakery products in accordance with regulatory and technical documentation, modern storage of bakery products.
Purpose of studying of the discipline
Study of the technology of bakery products, basic technological operations, requirements for the quality of finished products, basic technological calculations
Learning Outcomes
ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry
Learning outcomes by discipline
1) To distinguish between the raw materials of bakery production, its influence on the quality indicators of bakery products and technological processes, calculate the recipes of bakery production;
2) To name the main technological processes of bakery production, improve existing technological processes, use biochemical knowledge to control the production process of bakery products;
3) To determine the quality of finished products and analyze indicators, evaluate storage processes finished products.
Prerequisites
General technology of processing industries Grain science with the basics of crop production Commodity research of grain products
Postrequisites
Final examination

World cuisine

Discipline cycle	Profiling discipline
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline
The discipline contributes to the acquisition of knowledge about the cuisines of foreign countries, about historical traditions, images in nutrition, culinary products prepared with the use of special technologies, about historical names of dishes, about the use of spices that create the flavor of national cuisine, about the study of factors affecting nutrition priorities (climatic, geographical, political, social, historical) and the study of modern trends in nutrition, about examples of design, serving dishes.
Purpose of studying of the discipline
Master the technology of cooking dishes of national and foreign cuisine, acquire practical skills in organizing the production of national and foreign cuisine.
Learning Outcomes
ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry
Learning outcomes by discipline
1) To use recipes and technology of dishes from near and far abroad when preparing dishes at catering establishments;
2) To calculate the calculation of dishes, make a technological map of cooking dishes, recalculate recipes;
3) To evaluate and analyze the technological processes of food production, conduct a control assessment of the quality of dishes.
Prerequisites
Physical methods of food processing Commodity research of food products General technology of food production
Postrequisites
Final examination

Technology of flour confectionery

Discipline cycle	Profiling discipline
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

When studying the discipline with the use of trainings in an active form, the assortment of flour confectionery products, the purpose and role in daily human nutrition, the composition of raw materials, priority areas (functional products, therapeutic and preventive purposes) are considered. Students get acquainted with the technologies of making waffles, cookies, gingerbread, types of dough pieces, theoretical issues of creating pastry dough. When studying the course, the study of the storage of products and the further application of methods in practice is calculated.

Purpose of studying of the discipline

Training of a highly qualified specialist who is able to work creatively in the conditions of market relations at the enterprises of the confectionery industry, design and research institutions.

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To develop recipes, technologies, technological schemes of flour confectionery products, works with regulatory and technical documentation;
2) To analyze technological processes, optimizes existing technological processes, selects the appropriate technological equipment;
3) To conduct a comprehensive analysis of flour confectionery products by modern research methods.

Prerequisites

General technology of processing industries Grain science with the basics of crop production Commodity research of grain products

Postrequisites

Final examination

Service and maintenance in catering

Discipline cycle	Basic disciplines
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

The course provides for the study of the organization of service at catering establishments, forms of organization of service, services depending on the category of the enterprise, classification of services, kitchen, tableware, purpose, application, classification of table linen, its use at banquets, types of halls, forms of service, reception of orders for a banquet, types of banquets, types of menus, compilation menu, rules of etiquette, design, serving dishes, requirements for staff clothing, corporate culture of enterprises.

Purpose of studying of the discipline

Formation of students` understanding of the technique and technology of service, acquisition by students of theoretical knowledge and practical skills in the field of service technology; preparation of students to use the skills they have acquired in their future work.

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To classify the types of catering enterprises, technological equipment, organizational structure of catering enterprises, raw materials, technological equipment, table linen, dishes, services;
2) To represent the processes in the field of service and maintenance of catering enterprises, organize the reliability of technological operations, service and maintenance in accordance with the qualifications of the enterprise;
3) To analyze the quality of services and to compare domestic and foreign experience in the field of catering services.

Prerequisites

Physical methods of food processing Commodity research of food products General technology of food production

Postrequisites

Final examination

Technology of sugar confectionery and chocolate

Discipline cycle	Basic disciplines
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

This discipline contributes to the acquisition of new knowledge about modern technologies of sugar confectionery, chocolate, assortment formation.
New formulations of sugar confectionery products, innovative developments in the technology of sugar products, simple, complex formulations, modern methods of calculating recipes, output, new types of chocolate products and their manufacturing technology, cocoa beans, cocoa butter as raw materials for the production of chocolate, raw calculations, the quality of products according to standards are considered.

Purpose of studying of the discipline

Mastering the technology of confectionery products, basic technological operations, carrying out basic technological calculations

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry

ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To develop technologies of sugary confectionery and chocolate, to analyze technological processes based on the trend of development of these processes;
2) To classify confectionery products, raw materials and materials, technological processes used in the production of confectionery products;
3) To conduct a comprehensive analysis of food products by modern research methods.

Prerequisites

General technology of processing industries Grain science with the basics of crop production Commodity research of grain products

Postrequisites

Final examination

Special technologies of processing industries

Discipline cycle	Basic disciplines
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

The course covers the types of raw materials, technological modes, production parameters, product quality control, technology features, production lines and equipment.The current directions of processing industries are special technologies, where the issues of technology for the production of breakfast cereals, muesli, chips, food concentrates from cereals, instant noodles technology, the production of instant porridges, the production of corn sticks, resource–saving technologies for the production of cereal products, the preparation of sweets from nut crops are studied.

Purpose of studying of the discipline

Master knowledge in the field of special technologies of processing industries (breakfast cereals, muesli, cereals, chips, food concentrates), master methods of food quality control.

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To classify the range of grain products produced by special technologies, requirements for the quality of raw materials, technological indicators of raw materials;
2) To describe special technologies, optimize technological processes, develop technological processes of processing industries;
3) To apply modern methods of food quality control,

Prerequisites

General technology of processing industries Grain science with the basics of crop production Commodity research of grain products

Postrequisites

Final examination

Technology of vegetarian and dietary dishes at catering establishments

Discipline cycle	Basic disciplines
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

The course of the discipline examines the existing theories of nutrition (rational, balanced, dietary, blood type nutrition and others) vegetarianism as one of the theories of nutrition, the history of the emergence of vegetarian cuisine, the principles of therapeutic nutrition, the founders of therapeutic nutrition, classification of dietary tables, types of products used to prepare dietary dishes by numbers. Technological techniques and methods of culinary processing are studied in the preparation of dietary dishes according to the purpose, recipe, product yield standards

Purpose of studying of the discipline

To master the basics of the technology of cooking dietetic cuisine, to study the principles of dietary nutrition, to study the technology of cooking vegetarian cuisine.

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To classify nutrition theories, principles of balanced and rational nutrition, name therapeutic diets, features of vegetarian cuisine, methods of culinary processing, technological processes of cooking dishes;
2) To make recipes of dishes, develop technology of dishes, technical and technological maps, calculation maps for dishes of therapeutic nutrition and vegetarian cuisine;
3) To monitor the technological process of production dishes for dietary and vegetarian meals.

Prerequisites

Physical methods of food processing Commodity research of food products General technology of food production

Postrequisites

Final examination

Technological reporting at the enterprises of deep processing of grain

Discipline cycle	Basic disciplines
Course	4

Credits count	5
Knowledge control form	Examination

Short description of discipline
The discipline is aimed at studying the organization of accounting at enterprises, studying the rules and methods of accounting and control of tangible assets, intra-factory movement and movement of tangible assets, accounting forms, accounting documentation, registration of various forms of reporting on the accounting of materials, preparation of acts, inventory forms, rules of inventory at enterprises, acceptance of raw materials, shipment of inventory, movement of raw materials, semi-finished products, finished products at the enterprise.

Purpose of studying of the discipline
Students gain knowledge about the methods of accounting for fixed assets, raw materials, auxiliary materials and finished products, cost calculation and preparation of reports, documentation of acceptance and sale of goods, their disposal, write-off.

Learning Outcomes
ON9 To manage the activities of food industry enterprises

Learning outcomes by discipline
1) To carry out inventory, accounting of fixed assets, accounting of materials, calculate calculation items, calculate the cost of production, accounting;
2) To draw up documentation, to make reports, monthly, annual reports, acts on write–off, acceptance and transfer of material assets, to make a calculation of products ;
3) To apply methods of registration of accounting and reporting documentation and management of technological processes in professional activity.

Prerequisites
Technology of elevator industry Technology of breadmaking

Postrequisites
Final examination

Technological reporting at the enterprises of the meat, dairy industry and public catering

Discipline cycle	Basic disciplines
Course	4
Credits count	5
Knowledge control form	Examination

Short description of discipline
The discipline allows you to master the rules for the organization of accounting of material assets at food industry enterprises, the prospects for the use of various forms of accounting, the formation of a balance of funds, materials, the preparation of in-house reports, the preparation of inventory lists, acts, invoices, calculation cards, keeping logs of products in material warehouses, the release of finished products, the movement of inventory, the release of products, the offset of products by actual weight and basic quality indicators.

Purpose of studying of the discipline
Students gain knowledge about the methods of accounting for fixed assets, raw materials, auxiliary materials and finished products, cost calculation and preparation of reports, documentation of acceptance and sale of goods, their disposal, write-off.

Learning Outcomes
ON9 To manage the activities of food industry enterprises

Learning outcomes by discipline
1) To make up the material balance of raw materials and finished products, make a report on the movement of primary accounting documentation, on acceptance and release and processing of raw materials, semi-finished products, finished products;
2) To name the types of accounting documentation, technical documentation, types of organizational processes and accounting in production;
3) To apply the skills of registration of accounting documentation in professional activities

Prerequisites
Sausage production technology Technology of canned meat and fish production

Postrequisites
Final examination

Technology of children and dietary milk products

Discipline cycle	Profiling discipline
Course	4
Credits count	6
Knowledge control form	Examination

Short description of discipline
The discipline considers the relevance of the development of children`s and dietary dairy products in modern market requirements, analysis of quality, raw materials used, requirements and regulatory indicators, types of children`s dairy products (enpits, dry mixes, liquid, pasty, milk porridges), the range of dietary dairy products, methods of production of dietary and children`s products, technological control of production, formation of quality at all stages of production

Purpose of studying of the discipline
Studying the technology of children`s dietary dairy products, mastering knowledge in the field of creating multicomponent recipes of children`s and dietary dairy products.

Learning Outcomes
ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline
1) To name the biomedical requirements, the main and auxiliary raw materials for the production of dietary and children`s dairy products;

2) To develop balanced formulations of children`s and dietary dairy products in accordance with physiological norms, to evaluate the technological processes of the production of children`s, dietary dairy products;
3) To carry out quality control of children`s and dietary dairy products throughout their chain production cycle.

Prerequisites

Physical methods of food processing Commodity research of food products General technology of food production

Postrequisites

Final examination

Vegetable oil production technology

Discipline cycle	Profiling discipline
Course	4
Credits count	6
Knowledge control form	Examination

Short description of discipline

The discipline allows you to study the general issues of obtaining vegetable oils, the processes of preparation, storage of oilseeds, preparatory processes, basic processes, refining, the processing of secondary raw materials of oilseed production is studied. The use of oilseeds in the technology of vegetable oils. The use of active teaching methods allows you to get acquainted with the technology of food emulsion products (margarine, sauces, mayonnaise), master the knowledge in the storage of vegetable oils and fat-and-oil products, get acquainted with the current standards.

Purpose of studying of the discipline

To master the theoretical foundations of vegetable oil technology, the practical application of knowledge in the production process.

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To apply modern technologies for the production of vegetable oils, evaluate the operation of technological equipment during its production;
2) To justify the storage modes of raw materials, finished products, carry out basic technological calculations;
3) To analyze changes occurring during the storage of finished products, evaluate the quality of oilseed raw materials and vegetable oil.

Prerequisites

General technology of processing industries Grain science with the basics of crop production Commodity research of grain products

Postrequisites

Final examination

Technology of fermentation industries

Discipline cycle	Profiling discipline
Course	4
Credits count	6
Knowledge control form	Examination

Short description of discipline

The discipline examines the requirements for the quality of raw materials at enterprises, the organization of flow in fermentation production, the use of automation, special methods of processing raw materials, modern technologies of fermentation production, technologies of alcoholic beverages, soft drinks, malt, yeast, the types of microorganisms used in fermentation processes, enzyme complexes are studied, the issues of storage of finished products are studied qualitative characteristics of products, prospects for the development of the fermentation industry, production of products in foreign countries.

Purpose of studying of the discipline

To master the theoretical foundations of the technology of fermentation products, the practical application of knowledge in the production process

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To name the raw materials of fermentation production and the requirements for its quality, to calculate the recipes of food products of fermentation production;
2) To understand the production process of fermentation production and the principles of its organization, the state and prospects of development of fermentation production, types of tasks of optimization of technological processes;
3) To analyze the technological processes of fermentation production for compliance with regulatory documents, to ensure the stability of production indicators and the quality of products in practice

Prerequisites

General technology of processing industries Grain science with the basics of crop production Commodity research of grain products

Postrequisites

Final examination

Technology of production of meat products for children and dietary nutrition

Discipline cycle	Profiling discipline
Course	4
Credits count	6
Knowledge control form	Examination

Short description of discipline

The discipline studies modern aspects, trends in the creation of biomedical approaches in the formation of technologies for children`s and dietary nutrition from fish and meat products, the study of physiological norms and needs of various age groups of children, the characteristics of raw materials, new technological operations and recipes, the formation of the quality of modern medical and children`s products, the factors of the use of new biologically active components are analyzed , food additives for children`s and dietary products.

Purpose of studying of the discipline

Studying the technology of children`s dietary meat products, mastering knowledge in the field of creating multicomponent recipes for children`s and dietary meat products.

Learning Outcomes

ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline

1) To calculate and make recipes, develop technologies of meat products for children and dietary nutrition;
2) To use nutrition theories and technologies, organization of therapeutic and preventive nutrition, school and preschool children in professional activities;
3) To evaluate the quality of finished products using modern research methods

Prerequisites

Physical methods of food processing Commodity research of food products General technology of food production

Postrequisites

Final examination

Organization and planning of production

Discipline cycle	Basic disciplines
Course	4
Credits count	3
Knowledge control form	Examination

Short description of discipline

The discipline «Organization and production planning» gives different ideas about the basics of organization, industrial production planning, methods of evaluating its effective activities. As well as the analysis and forecast of production risks and losses of the enterprise, including ways to eliminate them as soon as possible. Students will gain knowledge and skills in the field of implementation, organization and planning of industrial production of the enterprise.

Purpose of studying of the discipline

The purpose of studying the discipline "Organization and planning of production" is to study the theoretical and methodological foundations of the organization and planning of production and production infrastructure at enterprises.

Learning Outcomes

ON9 To manage the activities of food industry enterprises

Learning outcomes by discipline

1) Demonstrates the ability to work effectively both individually and as a team member;
2) Organizes the work of small labor collectives of performers of production tasks;
3) Draws up technical documentation on the planning and organization of production, as well as on the established reporting according to approved forms.

Prerequisites

Mathematics Bases of economics, law and ecological knowledge

Postrequisites

Final examination

Cost management

Discipline cycle	Basic disciplines
Course	4
Credits count	3
Knowledge control form	Examination

Short description of discipline

The purpose of the course "Cost Management" is the formation of students` competencies in cost management, the ability to conduct analytical work in the field of cost management. This discipline is aimed at forming students with a set of necessary theoretical knowledge to understand the essence of costs and the basics of their management, as well as practical skills necessary for the purposes of strategic cost management.

Purpose of studying of the discipline

To reveal the problems in the field of organization, planning and management of production in a market economy in order to reduce costs.

Learning Outcomes

ON9 To manage the activities of food industry enterprises

Learning outcomes by discipline

1) Demonstrates the ability to work effectively both individually and as a team member;
2) Draws up technical documentation (work schedules, instructions, plans, estimates, applications for materials, equipment, etc.), as well as established reporting on approved forms;
3) Organizes the work of small groups of performers.

Prerequisites

Mathematics Bases of economics, law and ecological knowledge

Postrequisites

Final examination

Economics of enterprise

Discipline cycle	Basic disciplines
Course	4
Credits count	3
Knowledge control form	Examination

Short description of discipline
At the present stage of economic reforms, significant changes are taking place in the economy, especially at the microeconomic level: the nature and methods of economic activity of enterprises are changing. This course studies in detail the resources of the enterprise, the efficiency of their use, profitability and the main technical and economic indicators of the functioning of the enterprise. In addition, methods of stimulating labor resources, in order to optimize the production capacity and capital of the enterprise.

Purpose of studying of the discipline
The purpose of studying the discipline "Enterprise Economics" is to develop students` economic thinking based on the study of the economic mechanism of the enterprise in market conditions, providing deep theoretical knowledge and practical experience in the field of economics and organization of the enterprise and the use of technological equipment.

Learning Outcomes
ON9 To manage the activities of food industry enterprises

Learning outcomes by discipline
1) Demonstrates the ability to work effectively both individually and as a team member;
2) Assesses the feasibility study of design solutions;
3) Organizes activities related to the management of the actions of individual employees.

Prerequisites
Mathematics Bases of economics, law and ecological knowledge

Postrequisites
Final examination

Technology of combined feed industry

Discipline cycle	Profiling discipline
Course	4
Credits count	5
Knowledge control form	Examination

Short description of discipline
The discipline studies the relevance of the production of compound feeds, the use of grain crops as raw materials used for the manufacture of compound feeds, types of compound feed products used for the cultivation of farm animals, technologies, formulations of compound feeds, the study of production stages (acceptance and preparation of raw materials, grinding, mixing, dosing, packaging, storage), changes in feed products during storage, the quality of products, the manufacture of feed products in foreign countries, automated feed lines

Purpose of studying of the discipline
Study of the main technological stages of the production of compound feeds. Mastering this discipline will allow the student to gain knowledge and
skills in the management of the technological process at feed mills.

Learning Outcomes
ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline
1) To classify the assortment composition, name the vegetable and animal raw materials used in feed production, the requirements for the quality of raw materials;
2) To draw up basic schemes for processing raw materials, calculate the formulations of feed products;
3) To apply rational schemes for processing raw materials in production, qualimetric methods of quality control in feed production.

Prerequisites
General technology of processing industries Grain science with the basics of crop production Commodity research of grain products

Postrequisites
Final examination

Technology of dry dairy products and canned milk

Discipline cycle	Profiling discipline
Course	4
Credits count	5
Knowledge control form	Examination

Short description of discipline
The discipline examines modern theories of food drying, features of drying dairy products, studies the issues of primary processing of dairy raw materials, stages, processes necessary to obtain dry products, types of milk stabilizers necessary for its thermal stability during drying, classification of canned milk products, assortment range, condensed dairy products, quality requirements, production methods, storage, defects of canned milk products, nutritional value.

Purpose of studying of the discipline
Students gain knowledge about the technology of preserving dairy products, study the principles of canning, requirements for the quality of finished products

Learning Outcomes
ON7 To organize the technological process of production at the enterprises of the food industry
ON8 To organize the technological process of production at the enterprises of the food industry

Learning outcomes by discipline
1) To improve the technological processes of the production of canned milk and dry dairy products; using resource-saving methods;
2) To name raw materials and auxiliary materials for the production of canned milk, to read technological schemes, to make recipes, to calculate technological formulations, to describe the technological processes of the production of canned milk;
3) To apply instrumental methods of quality control of dried dairy products and canned food on production
Prerequisites
Physical methods of food processing Commodity research of food products General technology of food production
Postrequisites
Final examination

Designing of enterprises of the meat, dairy industry and public catering

Discipline cycle	Basic disciplines
Course	4
Credits count	6
Knowledge control form	Examination

Short description of discipline
Students in the educational process actively master the rules of designing enterprises according to the industry orientation, the technical and economic effectiveness of designing, the justification of reconstructions of enterprises, the study of the intra-factory structure of the enterprise, the relationship and flow of production, material and raw materials calculation, selection of equipment based on calculations, calculations of the areas of workshops and the entire enterprise, calculation of the number of workers of the main production. The layout of workshops, types of the master plan, its indicators, space-planning solutions are studied.
Purpose of studying of the discipline
To study the basics of the organization of the design of meat, milk and fish industry enterprises of various types, including poultry meat, and public catering, to teach methods of technological calculations, principles of the development of spatial planning and architectural and construction solutions.
Learning Outcomes
ON10 To develop design standards for the organization of the enterprise
Learning outcomes by discipline
1) To develop measures to improve technological processes, design and reconstruction of food industry enterprises;
2) To carry out technological design using CAD, ensuring the receipt of effective design developments that meet the requirements of the prospective development of the industry;
3) To use the achievements of science and technology in the design of food industry enterprises.
Prerequisites
Production practice II Technological equipment of meat, dairy industry and public catering enterprises
Postrequisites
Final examination

Designing of the enterprises of the baking, macaroni and confectionery industry

Discipline cycle	Basic disciplines
Course	4
Credits count	6
Knowledge control form	Examination

Short description of discipline
In the course of this discipline, students study industrial norms and rules for the design of bakery, pasta, confectionery industries, the structure of enterprises, the organization of technological flows of small, medium, high- capacity enterprises, the arrangement of automated lines at enterprises, calculations on the expenditure of funds for the main production, calculation of recipes, preparation of raw material balances, calculations of equipment, areas, arrangement equipment on layouts, drawing up master plans, planning solutions at enterprises, requirements for the USDD.
Purpose of studying of the discipline
Study of the theoretical foundations of the design of enterprises of flour and cereal industry, mastering practical design skills
Learning Outcomes
ON10 To develop design standards for the organization of the enterprise
Learning outcomes by discipline
1) To develop technological and technical specifications for new construction, extensions, recommendations and technical re-equipment of the enterprise with a given range of products, justification of the technological scheme of production;
2) To carry out basic technological calculations for the design of new enterprises;
3) To make design drawings in accordance with sanitary design standards.
Prerequisites
Production practice II Technological equipment of the baking, macaroni and confectionery industry
Postrequisites
Final examination

Pre-diploma practice

Discipline cycle	Profiling discipline
Course	4
Credits count	15
Knowledge control form	Total mark on practice

Short description of discipline
The student is engaged in the accumulation of knowledge and statistical data that will be necessary for him when writing a thesis, the

enterprise is studied from various angles (economic, technological, raw materials, managerial). The issues of supply of raw materials, sale of finished products, quality of raw materials, technological processes, technochemical control are considered. Technological equipment, shop layouts, work of production workshops, labor rationing, annual planning and planning for the future are studied.

Purpose of studying of the discipline

The study of technological processes, the principles of operation of technological equipment and safety, the structure of the enterprise, economic planning at the enterprise, the organization of labor at the enterprise, the possibility of reconstruction of the enterprise, enterprise management processes.

Learning Outcomes

ON9 To manage the activities of food industry enterprises
ON10 To develop design standards for the organization of the enterprise

Learning outcomes by discipline

1) To evaluate raw materials, the range of manufactured products, the nomenclature of product quality indicators, apply product control methods at the enterprise, carry out technological control work; control production processes;
2) To classify the organizational and functional structure of the enterprise, main and auxiliary workshops, the general plan of the enterprise;
3) To compare the technical and economic indicators of the enterprise, labor organization standards, production cost formation

Prerequisites

Designing of enterprises of the meat, dairy industry and public catering Designing of the enterprises of the baking, macaroni and confectionery industry

Postrequisites

Final examination

Production practice III

Discipline cycle	Profiling discipline
Course	4
Credits count	15
Knowledge control form	Total mark on practice

Short description of discipline

Production practice 3 contributes to the consolidation of the theoretical training of the student and the mastery of professional skills that will be used in production. Implementation of purposeful and active activities to accumulate material for a thesis (project). During the internship, the structure and composition of the enterprise, the organization of the delivery of raw materials, the sale of products, the movement of semi-finished products, production technology are studied, the analysis of the economic activity of the enterprise, the organization of marketing and management at the enterprise is carried out.

Purpose of studying of the discipline

Study of the organization of production, technology, technological equipment, planning and design of enterprises

Learning Outcomes

ON9 To manage the activities of food industry enterprises
ON10 To develop design standards for the organization of the enterprise

Learning outcomes by discipline

1) To carry out product classification; qualimetric assessment of product quality. examination of products;
2) To work with regulatory and technical documentation;
3) To control technological processes, analyze existing technologies and formulations.

Prerequisites

Designing of enterprises of the meat, dairy industry and public catering Designing of the enterprises of the baking, macaroni and confectionery industry

Postrequisites

Final examination