

The list of academic disciplines of the university component

6B08 - Agriculture and bioresources
(Code and classification of the field of education)

6B081 - Agronomy
(Code and classification of the direction of training)

0812
(Code in the International Standard Classification of Education)

B077 - Crop production
(Code and classification of the educational program group)

6B08101 - Agronomy
(Code and name of the educational program)

bachelor
(Level of preparation)

set of 2023

Developed

By the Academic Committee of the EP
The head of the AC N.Yessengulova
EP Manager A.Zakiyeva

Reviewed

At the meeting of the Commission on Quality Assurance of Veterinary Medicine and Agricultural Management
Recommended for approval by the Academic Council of the University
Protocol № 4.1 "06" April 2023
Chairman of the Commission G.Jamanova

Approved at the meeting of the Academic Council of the University Protocol No. 8 "25" April 2023.

Approved

at the meeting of the Academic Council of the University
Protocol № 1 "01" of September 2023
Chairman of the Academic Council of the University D.Orynbekov

Bases of economics, law and ecological knowledge

| | |
|------------------------|---------------------------------|
| Discipline cycle | General educational disciplines |
| Course | 1 |
| Credits count | 5 |
| Knowledge control form | Examination |

Short description of discipline

The integrated discipline includes the main issues and principles in the field of fundamentals of law and anti-corruption culture, economics, entrepreneurship and leadership, ecology and life safety. Features of the use of regulatory legal acts, the ability to use the business, ethical, social, economic, entrepreneurial and environmental standards of society. Specifics of environmental-legal, economic, entrepreneurial relations, leadership qualities and principles of combating corruption.

Purpose of studying of the discipline

It consists in studying the basic patterns of the functioning of living organisms, the biosphere as a whole and the mechanisms of their sustainable development under the conditions of anthropogenic impact and emergency situations; in understanding the concept of corruption, the legitimacy of the fight against it, the content of the state penal policy; in the formation of students' basic fundamental stable knowledge on the basics of economic theory, in instilling the skills and abilities of economic thinking; in introducing students to the theory and practice of entrepreneurship, to the basics of creating their own business; in the formation of theoretical knowledge and practical skills for the development and improvement of leadership qualities.

Learning Outcomes

ON1 Demonstrate socio-cultural, economic, legal, environmental knowledge, communication skills, apply information technology, taking into account modern trends in the development of society.

Learning outcomes by discipline

- ☒ analyzes the issues of safety and conservation of the natural environment as the most important priorities of life;*
- ☒ demonstrates knowledge of the fundamentals of nature management and sustainable development, assesses the impact of man-made systems on the environment;*
- ☒ shows knowledge of the main regulatory legal acts of the Republic of Kazakhstan, their understanding and application;*
- ☒ shows knowledge of the patterns of development of economic processes, clearly formulates his own position, finds and clearly sets out arguments in its defense;*
- ☒ is able to characterize the types of entrepreneurial activity and the entrepreneurial environment, draw up a business plan, create an entrepreneurial structure and organize its activities;*
- ☒ knows the fundamental provisions about the role of leadership in managing large and small social groups.*

Prerequisites

School course

Postrequisites

Basic and profile disciplines of the EP

Phytobiology

| | |
|------------------------|-------------------|
| Discipline cycle | Basic disciplines |
| Course | 1 |
| Credits count | 5 |
| Knowledge control form | Examination |

Short description of discipline

Formation of knowledge about plant morphology and anatomy, plant reproduction, the basics of plant florography and systematics, components of geobotany, ecosystems and phytogeography of plants, as well as the necessary minimum of general theoretical knowledge and practical abilities in plant physiology. Examines the processes of plant consumption of water and mineral substances by roots, the creation of organic matter by green plants, respiration, reproduction, growth and development of plants and their adaptability to external factors.

Purpose of studying of the discipline

The purpose of this course is to provide students - future agronomists of the highest qualification with knowledge of morphology, anatomy and physiology of various plant species, knowledge of the basics of cytology and histology of plants; knowledge of biochemical processes taking place in plant cells, features of the photosynthesis process in green plants, the basics of systematics and geography of plants.

Learning Outcomes

ON2 To carry out the prediction of the phases of crop development, weather conditions, the influence of factors on yield and to properly use them in agriculture; to describe the morphological characteristics of plant organs; knowledge of the essence of physiological processes taking place in the plant cell, biological features.

Learning outcomes by discipline

- 1) to forecast the phases of crop development, weather conditions, the influence of factors on yield and to use them correctly in agriculture;*
- 2) describe the morphological features of plant organs;*
- 3) process and analyze the results of field and laboratory studies;*

Prerequisites

School course

Postrequisites

Crop production

Introduction to the specialty

| | |
|------------------|-------------------|
| Discipline cycle | Basic disciplines |
| Course | 1 |
| Credits count | 3 |

Short description of discipline

The discipline considers the basic concepts of crop production industries in order to create an initial idea of future professional activity, a body of knowledge about the relationship of agronomy with other branches of production and processing of agricultural products. The main attention is paid to the prospects for the development of modern technologies in agriculture and crop production, the laws of agriculture, the basics of agrochemistry and crop production.

Purpose of studying of the discipline

To acquaint students with the basics of the chosen specialty-agronomy, its role in the development of agricultural production and solving food problems of mankind.

Learning Outcomes

ON2 To carry out the prediction of the phases of crop development, weather conditions, the influence of factors on yield and to properly use them in agriculture; to describe the morphological characteristics of plant organs; knowledge of the essence of physiological processes taking place in the plant cell, biological features.

Learning outcomes by discipline

1) to consider the stages of knowledge development and views on the soil of representatives of different epochs since the inception of agriculture;

2) to give knowledge about the life and work of outstanding scientists of soil scientists and agronomists, about the history of interesting and important ideas, hypotheses, theories and methods for science;

3) in-depth familiarization of students with theoretical and practical knowledge about the profession of an agronomist, the possibilities of applying knowledge in the disciplines of agronomy;

Prerequisites

School course

Postrequisites

Soil science Crop production Agriculture

Agrometeorology

| | |
|------------------------|-------------------|
| Discipline cycle | Basic disciplines |
| Course | 1 |
| Credits count | 3 |
| Knowledge control form | Examination |

Short description of discipline

The discipline considers the most important agrometeorological factors that determine the living conditions, productivity of plants; the use of the features of the weather, climatic conditions of the area in agriculture. Considers the main instruments in agrometeorology, the concept, significance of solar radiation, temperature and humidity of soil, air, the importance of precipitation for agriculture, the influence of adverse factors on the growth and development of crops.

Purpose of studying of the discipline

To acquaint students with the basics of agrometeorology, its role in the development of agricultural production and solving food problems of mankind.

Learning Outcomes

ON2 To carry out the prediction of the phases of crop development, weather conditions, the influence of factors on yield and to properly use them in agriculture; to describe the morphological characteristics of plant organs; knowledge of the essence of physiological processes taking place in the plant cell, biological features.

Learning outcomes by discipline

1) Know the composition, measurement methods and ways of effective use of solar radiation, temperature, water regime of soil and air in crop production; meteorological phenomena dangerous for agriculture and measures to combat them; rules and methods of application of agrometeorological and climatic information in agronomy;

2) Be able to monitor solar radiation, temperature, humidity of air and soil, precipitation and other meteorological factors; make agrometeorological forecasts, analyze agrometeorological conditions of a specific period; evaluate the agro-climatic resources of the territory; plan and conduct field

work taking into account the peculiarities of the thermal and humidity regime of agricultural landscapes;

3) Possess: modern methods of assessing the natural resource potential of the territory for the purposes of agricultural production; types and methods of agrometeorological observations and forecasts; skills of organizing and conducting field work and making managerial decisions in various weather conditions of agroecosystems functioning; methods of protecting crops from dangerous meteorological phenomena.

Prerequisites

School course

Postrequisites

Soil science Crop production Agriculture

Educational practice

| | |
|------------------------|------------------------|
| Discipline cycle | Basic disciplines |
| Course | 1 |
| Credits count | 2 |
| Knowledge control form | Total mark on practice |

Short description of discipline

During the course of the training practice, the student consolidates the knowledge gained in the process of studying the disciplines of the basic, variable and profile parts; develop practical work skills; get acquainted with modern equipment. Acquires skills: work with educational, scientific, regulatory, methodological and instructional literature, recognition of wild and cultivated plants, the main types of soils; diagnostics of pests and diseases of agricultural crops; agrometeorological observations.

Purpose of studying of the discipline

The main purpose of the educational practice is to consolidate the knowledge acquired in the course of lectures, laboratory classes and independent work of the student, and to obtain professional competencies, acquire practical skills and professional experience.

Learning Outcomes

ON2 To carry out the prediction of the phases of crop development, weather conditions, the influence of factors on yield and to properly use them in agriculture; to describe the morphological characteristics of plant organs; knowledge of the essence of physiological processes taking place in the plant cell, biological features.

Learning outcomes by discipline

1. Acquire the knowledge and skills necessary for the development of special disciplines, future specialty and professional work;
2. Develop skills of self-solving problems and tasks related to the problems of the chosen specialty;
3. Master the best working methods used on farms.

Prerequisites

Introduction to the specialty

Postrequisites

Production practice 1

Forage production

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

Short description of discipline

Examines the basics of creating and strengthening the forage base on the basis of rational use and improvement of natural and field forage lands, information about the bioecological features of plants of hayfields and pastures, technology for improving forage lands. The discipline studies methods of determining the yield and nutritional value of feed, the process and methods of harvesting hay, silage and haylage; technology of feed preparation, determination of the quality of yield of fodder crops.

Purpose of studying of the discipline

Acquisition of knowledge about the patterns of development and life of forage plants, the relationship of plants with the environment, methods and techniques for creating optimal conditions for the growth of forage crops and obtaining feed based on them.

Learning Outcomes

ON5 Perform work on technologies to improve forage lands, fodder; to determine the methods and principles of activities on pastoral agriculture; to introduce advanced technologies of cultivation of agricultural crops taking into account biological features of plants.

Learning outcomes by discipline

1. To determine the characteristics of the forage base based on the natural use and severity of field forage lands
2. Analyze information about the bioecological features of plants of hayfields and pastures
3. Develop methods for determining the yield and nutritional value of feed

Prerequisites

Phytobiology

Postrequisites

Meadows and pasture farming

Genetic

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

Short description of discipline

The discipline introduces the basics of heredity and variability of organisms, the main provisions of genetics, Mendel's laws, the chromosomal theory of heredity. Gives an idea of the cytological foundations of heredity, the patterns of inheritance in remote and intraspecific hybridization. Examines the provisions on the molecular foundations of heredity, the main types of variability, polyploidy and its role in breeding and evolution, genetic evaluation of populations and individuals by offspring.

Purpose of studying of the discipline

The purpose of this course is to ensure the disclosure of the content of the basic principles, laws and concepts of each section of the course and the development of genetic thinking skills for conscious perception and mastering the methods of genetics.

Learning Outcomes

ON6 Develop systems of measures for plant protection; conduct surveys of agricultural land for pests and diseases of crops, identify the main types of pests and diseases; to carry out all types of breeding works taking into account the basic laws of genetics; to determine varietal and sowing qualities of seeds.

Learning outcomes by discipline

- 1) To know the regularities of the manifestation of the fundamental properties of life – heredity and variability – at various levels of the organization of living systems.
- 2) apply knowledge about genetic patterns in solving genetic problems, forecasting and explaining the results of various types of crosses, solving practical problems in the field of breeding, biotechnology, genetic engineering, medicine, nature protection and human health, medical and genetic counseling, genetic control of biosafety of new products and industries.
- 3) Possess - various methods of solving genetic problems; the most important methods of genetic analysis.

Prerequisites

School course

Postrequisites

Production practice 1

World of Abai

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

Short description of discipline

The discipline is aimed at studying historical facts, the philosophical and artistic foundations of the works of Abay Kunanbaev, Shakarim Kudaiberdiev, which form worldview and aesthetic values, the student's ability to express his opinion, practical skills and perception of such human qualities as morality, honesty, artistic character. The genius of the writers of Kazakh literature and the role of M. Auezov in the study and popularization of Abai's heritage, the significance of his works for history, literature and science are determined.

Purpose of studying of the discipline

Formation of the meaning of philosophical and ideological being, understanding of the problems raised in the works of Abai Kunanbayuly, Shakarim Kudaiberdiuly, Mukhtar Auezov and application of the acquired knowledge in the practice of everyday life.

Learning Outcomes

ON1 Demonstrate socio-cultural, economic, legal, environmental knowledge, communication skills, apply information technology, taking into account modern trends in the development of society.

Learning outcomes by discipline

- 1) Analyzes the philosophical and artistic foundations of works, historical facts related to the creative heritage of Abai Kunanbayev, Shakarim Kudaiberdiyev, Mukhtar Auezov*
- 2) Uses in practice the humanistic ideas of Abai's philosophical and artistic works*
- 3) Assesses the place and significance of Abai's works in the history of literature and science*

Prerequisites

School course

Postrequisites

Basic and profile disciplines of the EP

Inorganic and organic chemistry

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

Short description of discipline

The discipline is aimed at studying the composition, structure, properties, preparation of a chemical reaction. Examines the sections of inorganic, organic chemistry with its main objects: chemical elements, substances, chemical reactions, with its fundamental concepts, laws, theories, patterns of chemical processes; methods of theoretical, experimental research in chemistry; modern possibilities of chemistry; classification, nomenclature, structure of organic compounds; properties, basic methods of synthesis of organic compounds.

Purpose of studying of the discipline

Mastering the achievements of modern chemical science by students and ways of applying the laws of chemistry in professional activity

Learning Outcomes

ON3 To develop technological maps of cultivation of agricultural crops taking into account soil and climatic conditions and biological features of agricultural crops; to prove a method of harvesting of crops, primary processing of crop production and its laying on storage.

Learning outcomes by discipline

- 1) to use knowledge about the structure of matter, the nature of chemical bonds in various classes of chemical compounds to understand the properties of materials and the mechanism of chemical processes occurring in the surrounding world;*
- 2) plan and conduct a chemical experiment, process their results and evaluate errors, mathematically model chemical processes and phenomena, put forward hypotheses and establish the boundaries of their application;*
- 3) the ability to use knowledge of the properties of chemical elements, compounds and materials based on them to solve the tasks of professional activity;*

Prerequisites

School course

Postrequisites

Agrochemistry

Soil science

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

Short description of discipline

The discipline is aimed at studying the origin, genesis, classification, geographical distribution and protection of soils, ways of rational use of it in agricultural production, preservation and improvement of fertility. The course examines the factors of soil formation, chemical composition, physical properties, nomenclature and classification of soils, water, air, thermal properties and soil regimes, regulation of soil regimes and directions of the soil-forming process, the main types and varieties of soils.

Purpose of studying of the discipline

generalization of new theoretical knowledge about soils and their fertility, acquisition of practical skills in diagnostics and qualitative assessment of soils, agricultural production grouping and regulation of soil regimes.

Learning Outcomes

ON10 To recognize the main types and varieties of soils, to justify the direction of their use in agriculture and methods of reproduction of fertility; determine the bonus point.

Learning outcomes by discipline

- 1) Description of morphological features of soils and determination of the main types of soils in Kazakhstan;
- 2) apply methods for determining the chemical properties of soils, the granulometric composition of soil moisture; correctly and skillfully conduct a comprehensive analysis of the results of the study of soil properties;;
- 3) apply the acquired knowledge in practice and apply methods of studying soils;

Prerequisites

Agrometeorology

Postrequisites

Agricultural reclamation

Production practice 1

| | |
|------------------------|------------------------|
| Discipline cycle | Basic disciplines |
| Course | 2 |
| Credits count | 5 |
| Knowledge control form | Total mark on practice |

Short description of discipline

During the internship, the student consolidates the knowledge gained in the process of studying the disciplines of the basic, variable and profile parts; develop practical skills; get acquainted with modern equipment. Acquires skills: carrying out basic and pre-sowing tillage, organizing and carrying out sowing of agricultural crops, carrying out technological techniques for caring for crops and plantings of agricultural crops. carrying out protective measures against harmful organisms (weeds, pests and diseases), organizing and carrying out harvesting of agricultural crops, primary processing of crop production and laying it for storage.

Purpose of studying of the discipline

The purpose of practical training 1 is to acquire practical skills in morphology, taxonomy of insect pests and diseases; recognition of the main types and varieties of soils

Learning Outcomes

ON2 To carry out the prediction of the phases of crop development, weather conditions, the influence of factors on yield and to properly use them in agriculture; to describe the morphological characteristics of plant organs; knowledge of the essence of physiological processes taking place in the plant cell, biological features.

Learning outcomes by discipline

1. collection, processing and generalization of practical material on the topic of research work (project);
2. analysis of statistical data and practical material on the research topic;
3. formulation of conclusions, patterns, recommendations and suggestions on the topic of research work (project) or report.

Prerequisites

School course

Postrequisites

Agrochemistry

Digitalization in agronomy

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

Short description of discipline

It is aimed at studying the main technologies implemented primarily in the framework of digitalization of the agricultural economy in Kazakhstan. It includes: automation of work with mass, electronic site maps and unmanned aerial vehicles, digital tools for using informative resources, platforms and technologies that increase the effectiveness of modern agricultural production; acquisition of practical skills in using current digital technologies to solve applied problems in agriculture.

Purpose of studying of the discipline

The purpose of the discipline is to form students` knowledge, practical skills and abilities; to study digital tools for using information resources, platforms and technologies that increase the efficiency of modern agricultural production; to gain practical skills in using modern digital technologies to solve applied problems in agriculture.

Learning Outcomes

ON2 To carry out the prediction of the phases of crop development, weather conditions, the influence of factors on yield and to properly use them in agriculture; to describe the morphological characteristics of plant organs; knowledge of the essence of physiological processes taking place in the plant cell, biological features.

ON3 To develop technological maps of cultivation of agricultural crops taking into account soil and climatic conditions and biological features of agricultural crops; to prove a method of harvesting of crops, primary processing of crop production and its laying on storage.

ON4 To develop technological maps of cultivation of agricultural crops taking into account soil and climatic conditions and biological features of agricultural crops; to prove a method of harvesting of crops, primary processing of crop production and its laying on storage.

Learning outcomes by discipline

- "1) to use modern digital technologies for self-development of self-learning; to use the opportunities provided for the acquisition of new knowledge and skills;
- 2) to choose and apply digital technologies to solve tasks in their professional activities; to predict the development of various processes;
- 3) solve various official and professional tasks using information technology;"

Prerequisites

Information and communication technology

Postrequisites

Agrolandscape farming system

Production practice 2

| | |
|------------------------|------------------------|
| Discipline cycle | Basic disciplines |
| Course | 3 |
| Credits count | 5 |
| Knowledge control form | Total mark on practice |

Short description of discipline

During the internship, the student consolidates the knowledge gained in the process of studying the disciplines of the basic, variable and profile parts; develop practical skills; get acquainted with modern equipment. Acquires skills: carrying out basic and pre-sowing tillage, organizing and carrying out sowing of agricultural crops, carrying out technological techniques for caring for crops and planting agricultural crops, carrying out protective measures against harmful organisms (weeds, pests and diseases), organizing and carrying out harvesting of agricultural crops, primary processing of crop production and laying it for storage.

Purpose of studying of the discipline

The purpose of industrial practice 2 is to consolidate professional competencies, acquire practical skills in production

Learning Outcomes

ON4 To develop technological maps of cultivation of agricultural crops taking into account soil and climatic conditions and biological features of agricultural crops; to prove a method of harvesting of crops, primary processing of crop production and its laying on storage.

Learning outcomes by discipline

- 1. To develop technological maps of cultivation of agricultural crops taking into account soil and climatic conditions and biological characteristics of agricultural crops;*
- 2. to justify the method of harvesting agricultural crops, primary processing of crop production and laying it for storage.*

Prerequisites

Educational practice

Postrequisites

Production practice 3

Breeding and seed production of agricultural crops

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

Short description of discipline

The discipline is aimed at studying the breeding process in crop production, hybridization techniques, crossing techniques; testing of crops; filling out documentation for varietal crops. The issues of organization of primary seed production and improvement of varieties in the process of primary seed production are considered; cultivation of elite varieties of cereals, legumes; cultivation of seeds of fertile and sterile analogues of the corn line; cultivation of virus-free elite potatoes using clone selection; varietal characteristics of the most significant crops.

Purpose of studying of the discipline

To study the selection process in crop production, methods and techniques of selection, evaluation of breeding material, varietal control

Learning Outcomes

ON2 To carry out the prediction of the phases of crop development, weather conditions, the influence of factors on yield and to properly use them in agriculture; to describe the morphological characteristics of plant organs; knowledge of the essence of physiological processes taking place in the plant cell, biological features.

ON6 Develop systems of measures for plant protection; conduct surveys of agricultural land for pests and diseases of crops, identify the main types of pests and diseases; to carry out all types of breeding works taking into account the basic laws of genetics; to determine varietal and sowing qualities of seeds.

Learning outcomes by discipline

- 1) to know modern methods of breeding, their development and improvement based on the latest discoveries in biology (in relation to the peculiarities of a particular culture);*
- 2) to implement in practice the methods of breeding new highly productive varieties of agricultural crops, the organization of variety testing and zoning, as well as the system of placement and introduction into seed production of the best zoned varieties.*
- 3) Possess methods of selecting varieties of field crops for specific environmental and economic conditions.*

Prerequisites

Genetic

Postrequisites

Methods of agricultural crops variety testing

Agriculture

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

Short description of discipline

This discipline is aimed at studying theoretical and practical issues of agriculture, including the intensification of the living conditions of agricultural plants, a set of measures against weeds, crop rotations, precursors and methods, methods of soil treatment, the principles of biologization, ecologization of agriculture and the prerequisites of the agro-landscape approach in modern farming systems are also considered. The issues of improving soil fertility and general problems of growing crops are highlighted.

Purpose of studying of the discipline

to give students in this discipline deep and high-quality knowledge. in particular, on the basis of theoretical training and practical skills in

the implementation of a system of agrotechnical measures, the reproduction of effective soil fertility - as the main means of production, through weed control, management and development of crop rotations, proper tillage system

Learning Outcomes

ON2 To carry out the prediction of the phases of crop development, weather conditions, the influence of factors on yield and to properly use them in agriculture; to describe the morphological characteristics of plant organs; knowledge of the essence of physiological processes taking place in the plant cell, biological features.

ON3 To develop technological maps of cultivation of agricultural crops taking into account soil and climatic conditions and biological features of agricultural crops; to prove a method of harvesting of crops, primary processing of crop production and its laying on storage.

Learning outcomes by discipline

- "1) to draw up schemes of various types and types of crop rotations;
- 2) apply comprehensive weed control measures;
- 3) determine the quality of tillage;"

Prerequisites

Soil science

Postrequisites

Agrolandscape farming system

Crop production

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

Short description of discipline

This course studies morphological and biological features of crop varieties, living conditions and cultivation techniques. The discipline reveals the theoretical foundations of plant productivity and crop formation, classification and characteristics of field crops, as well as cultivation technology. The practical part of the discipline is aimed at drawing up technological maps of cultivation of leading field crops, taking into account specific soil and climatic conditions of the area.

Purpose of studying of the discipline

To study the morphological and biological features and agricultural methods of cultivation of agricultural crops

Learning Outcomes

ON2 To carry out the prediction of the phases of crop development, weather conditions, the influence of factors on yield and to properly use them in agriculture; to describe the morphological characteristics of plant organs; knowledge of the essence of physiological processes taking place in the plant cell, biological features.

ON4 To develop technological maps of cultivation of agricultural crops taking into account soil and climatic conditions and biological features of agricultural crops; to prove a method of harvesting of crops, primary processing of crop production and its laying on storage.

Learning outcomes by discipline

1) know the technology of cultivation of agricultural crops, and ways to protect plants from harmful organisms, and determine the dose of fertilizers taking into account soil fertility; methods of harvesting without loss

2) be able to carry out timely harvesting of field crops and without losses; correct the situation during the technological process, if weather

conditions allow; obtain high and stable yields of agricultural crops; calculate fertilizer doses, plan measures to protect plants from harmful objects.

3) own the technological process during the growing season of field crops; own a harvesting plan with rational fixing of harvesting equipment, and a flow method of harvesting

Prerequisites

Phytobiology

Postrequisites

Technology and storage of crop products

Technology and storage of crop products

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

Short description of discipline

The course is aimed at studying problems related to the quality of crop production and ways to improve them, the nature of losses of these products and the organization of their storage, rational methods of processing and storage of agricultural raw materials. The discipline considers questions about the vital activity of pathogens, insects and ticks in plant raw materials and the harm caused by them, and control measures. The material on flour milling, bakery and canning industries is demonstrated.

Purpose of studying of the discipline

The purpose of this course is to study the basics of the theory and practice of storage of agricultural products, as well as training specialists and managers of agriculture in the field of technology of storage and processing of agricultural products.

Learning Outcomes

ON4 To develop technological maps of cultivation of agricultural crops taking into account soil and climatic conditions and biological features of agricultural crops; to prove a method of harvesting of crops, primary processing of crop production and its laying on storage.

Learning outcomes by discipline

1) know the methods of managing technological processes in the production of crop products that meet the requirements of standards and the market; the situation in the technological process;

2) to substantiate the method of harvesting agricultural crops, primary processing of crop production and laying it for storage.

3) To choose the most rational modes of storage of products, taking into account its quality and purpose; to select the optimal modes of

processing of raw materials, taking into account its quality and the range of products received.

Prerequisites

Crop production

Postrequisites

Production practice 3