The list of academic disciplines of the university component

7M07 - Engineering, Manufacturing and Civil engineering
(Code and classification of the field of education)

7M072 - Manufacturing and processing
(Code and classification of the direction of training)

0720
(Code in the International Standard Classification of Education)

M111 - Food production
(Code and classification of the educational program group)

7M07201 - Technology of food products (by application)
(Code and name of the educational program)

Master
(Level of preparation)

set of 2023

Semey 2023

Developed
By the Academic Committee of the EP
The head of the AC Nurymkhan G.
EP Manager Assirzhanova Zh.

Reviewed
at the meeting of the Quality Assurance Commission of the Faculty of Engineering and Technology
Recommended for approval by the Academic Council of the University
Protocol № 4.6 "10" April 2023
Chairman of the Commission on Quality Assurance Abdilova G.

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 Orynbekov D.R.

Foreign language (professional)

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

Short description of discipline
Mastery of general cultural, professional and special competencies for the implementation of professional activities, involving teaching free reading of original literature of the relevant branch of knowledge in a foreign language; development of oral communication skills in monological and dialogical form in the specialty; development of written scientific communication skills on topics related to the scientific work of a graduate student, as well as familiarization with the forms and types of international cooperation in the scientific field.

Purpose of studying of the discipline
The purpose of studying the discipline "Foreign language (professional)" in the master`s degree program is the systematic deepening of communicative competence within the framework of international standards of foreign language education on the basis of further development of skills and abilities of active language proficiency in the professional activity of the future master.

Learning Outcomes
ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.

Learning outcomes by discipline
ON 1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.
- to know the specifics of oral and written speech in the fields of professional, scientific, socio-political relations;
- to know the national and cultural peculiarities of the creation and organization of a text in a foreign language within the framework of professionally motivated conditions;
- to know the stylistic features of the vocabulary of a foreign language in the field of professional communication;
be able to perform:
- implementation of professional activity in linguistic, sociolinguistic, information-analytical and communicative aspects;
- creating your own verbal and non-verbal order in the fields of professional and scientific socio-political relations;
- the use of a variety of language and speech means adequate to social factors, communication conditions, the status of the interlocutor and his communicative intentions;
-be able to organize speech activity as a representative of another culture and the nature of communication in accordance with the tasks of communication, the speech situation, individual characteristics;
the presence of skills:
- to perceive by ear and understand the appropriate level of messages of a business, informational and vocational nature;
- dialogical and monological communication within the framework of professional activity;
- to get acquainted and study business and scientific and technical documentation, which provides for obtaining information from what has been read and using it in speech;
- have the skills of systematic presentation of thoughts, thinking, information when writing letters of an official, professional nature;

Prerequisites
Bachelor

Postrequisites
Final examination

History and philosophy of science

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

Short description of discipline
The discipline is aimed at studying the culture of scientific thinking, forms analytical capabilities and research skills, provides theoretical and practical knowledge necessary for a future scientist. Explores the historical evolution of the sciences and the philosophical perspectives they form. The origins of modern science, its social and institutional connections are described. General philosophical issues related to thought experiments, confirmation and refutation of theories, the origin and application of quantitative and high-quality research methods are considered.

Purpose of studying of the discipline
the formation of an interdisciplinary worldview among undergraduates, based on a deep understanding of the history and philosophy (theory) of scientific thinking, as part of a universal culture.

Learning Outcomes
ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.

Learning outcomes by discipline
Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activity.

Prerequisites
Bachelor

Postrequisites
Final examination

Tertiary education

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

Short description of discipline

The course is aimed at studying the main directions, principles and patterns of higher education. During the course of the course, the basic concepts of modern pedagogy, concepts and theories of teaching and upbringing, didactics of higher education will be considered. The master`s student will master the skills of designing the organization of the educational process, techniques of individual and group reflection, will be able to correctly formulate pedagogical goals, apply educational technologies in the educational process. in the process, to design work programs of disciplines.

Purpose of studying of the discipline

The purpose of mastering the discipline is to master the system of knowledge about higher education, its content, structure, principles of educational process management and mastering modern technologies in the field of management and organization of the educational process

Learning Outcomes

ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.

Learning outcomes by discipline

• Solves the problems of higher pedagogical education and the prospects for its further development;
• Considers the application of effective university technologies;
• Solves topical and psychological and pedagogical problems,

Prerequisites

Bachelor

Postrequisites

Teaching practicum

Psychology of management

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

Short description of discipline

The content of the course is aimed at mastering the approaches and directions of management psychology, psychological laws of management, features of planning and solving management problems. Students will get acquainted with the psychological methods of resolving conflict situations, master the ways of motivating work, the methods of using effective management styles. Skills will be formed to analyze the psychological causes underlying the decline in the effectiveness of the management process.

Purpose of studying of the discipline

The purpose of the discipline "Psychology of Management" is the formation of scientifically based ideas about the system of mental phenomena, psychological variables of behavior and conscious human activity in modern conditions and allows undergraduates to form skills of applying the acquired psychological knowledge in educational activities

Learning Outcomes

ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.

Learning outcomes by discipline

- they are able to determine the forms and methods of effective team management;
- develop plans for the development of organizations, provide psychological support for the activities of organizations;
- possess methods of solving managerial tasks.

Prerequisites

Bachelor

Postrequisites

Final examination

Theoretical and practical aspects of creating combined foods

Discipline cycle	Profiling discipline
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

Rules of scientific and technical creation of combined food products. Modern orientation in the manufacture of functional nutrition products, for children, sports, therapeutic and vegetarian purposes. Improvement of micronutrient products based on vegetables and milk: research methods and practical solutions. The role of plant protein systems for the purpose of enriching meat products, as well as improving products with macro, microelements, polyunsaturated fatty acids, vitamins.

Purpose of studying of the discipline

Mastering theoretical and practical aspects in the field of scientific fundamentals of meat production

Learning Outcomes

ON2 To use scientific and methodological approaches in the development and improvement of food production technology with the use of modern progressive techniques in the field of food products.
ON3 Develop and improve technological processes for the production of food products of plant and animal origin.
ON4 Develop measures to improve the technological processes of food production.

Learning outcomes by discipline

- to reproduce the scientific foundations of physico-chemical and biochemical properties and storage of meat products, basic theories, current trends, scientific principles of creation in the production of meat products
- apply knowledge in the field of development of innovative technologies of combined meat products of mutually enriched composition
- apply practical skills in obtaining combined food products in scientific research

Prerequisites

Bachelor

Postrequisites

High-tech production of functional foods Progressive technics and technology in the branch of food industry Resource saving technology in food industry The research work of a student, including an internship and the implementation of a master s thesis (I) Improving the biotechnological foundations of multicomponent meat products technology

The research work of a student, including an internship and the implementation of a master s thesis (I)

Discipline cycle	Profiling discipline
Course	1
Credits count	11
Knowledge control form	Total mark on practice

Short description of discipline

Development of the ability to independently carry out activities in the field of education and science related to solving complex professional tasks in innovative conditions using modern research methods and methods, the latest achievements of techniques and technologies in research work

Purpose of studying of the discipline

Planning and organization of research work, including the study of the direction of scientific research, determination and justification of the relevance of the chosen research topic, analysis of literary data on the chosen topic

Learning Outcomes

ON2 To use scientific and methodological approaches in the development and improvement of food production technology with the use of modern progressive techniques in the field of food products.
ON5 Design and carry out comprehensive research to analyze the qualitative characteristics of food products. Apply the methodological foundations of laboratory research using modern equipment and computer systems.
ON8 To apply professional knowledge and skills in the implementation of innovation policy objectives.

Learning outcomes by discipline

- to carry out a detailed review of the literature on the topic of the dissertation research, which is based on current research publications and contains an analysis of the main results and provisions obtained by leading experts in the field of research, an assessment of their applicability within the framework of the dissertation research
- analyze and process scientific, technical and patent information on the subject of research using specialized databases and information technologies, including Internet technologies
- selection and study of research methods, materials on the topic of the dissertation

Prerequisites

Basic and profile disciplines of the EP

Postrequisites

The research work of a student, including an internship and the implementation of a master s thesis (III)

Teaching practicum

Discipline cycle	Basic disciplines
Course	2
Credits count	6
Knowledge control form	Total mark on practice

Short description of discipline

General familiarization with the system in higher educational institutions, the peculiarity of teaching specialized disciplines in these institutions, directions - educational, educational and scientific. Systematic analysis of practical activities. Methodology and evaluation of laboratory and practical classes. Application of innovative and modern technologies and teaching techniques. Performing classes according to the schedule and plan. Contact with the audience. Creation of teaching materials.

Purpose of studying of the discipline

Practical consolidation of theoretical knowledge, skills and abilities of undergraduates, acquisition of practical experience in the field of future professional activity

Learning Outcomes

ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.

Learning outcomes by discipline

- to study the current state of the educational process at the university, advanced pedagogical experience, improve skills in determining specific educational tasks based on the general goals of education, taking into account the age, professional and individual characteristics of undergraduate students and socio-psychological characteristics of the team, find ways to solve them and predict the expected results
- to consolidate, deepen and enrich pedagogical special knowledge in the process of their use in solving specific learning tasks
- to create professionally significant personality qualities among undergraduates, to develop professional knowledge and skills; to develop a creative, research approach to pedagogical activity

Prerequisites

Basic and profile disciplines of the EP

Postrequisites

Practice research

The research work of a student, including an internship and the implementation of a master s thesis (II)

Discipline cycle	Profiling discipline
Course	2
Credits count	4
Knowledge control form	Total mark on practice

Short description of discipline
Development of the ability to independently carry out activities in the field of education and science related to solving complex professional tasks in innovative conditions using modern research methods and methods, the latest achievements of techniques and technologies in research work
Purpose of studying of the discipline
Conducting research work within the framework of the chosen topic, including experimental research, data processing and analysis, final formulation of a research problem, development and analysis of methods for its solution
Learning Outcomes
ON2 To use scientific and methodological approaches in the development and improvement of food production technology with the use of modern progressive techniques in the field of food products.
ON5 Design and carry out comprehensive research to analyze the qualitative characteristics of food products. Apply the methodological foundations of laboratory research using modern equipment and computer systems.
ON8 To apply professional knowledge and skills in the implementation of innovation policy objectives.
Learning outcomes by discipline
- apply methods of conducting independent research and interpreting their results
- processing, interpretation and analysis of the obtained research results, evaluation of the predicted results from the point of view of scientific and practical significance
- apply modern methods of studying the properties of raw materials, semi-finished products and finished products, advanced techniques and technologies in research work and conduct experimental work on the topic of the dissertation
Prerequisites
Basic and profile disciplines of the EP
Postrequisites
The research work of a student, including an internship and the implementation of a master s thesis (III)

Practice research

Discipline cycle	Profiling discipline
Course	2
Credits count	13
Knowledge control form	Total mark on practice

Short description of discipline
Research practice is part of the research work of a master`s student. The research practice is focused on solving the tasks set on the topic of the master`s thesis. Setting up a research experiment, using organoleptic, structural-mechanical, physico-chemical research methods in assessing the quality of raw materials and finished products. The practice is carried out by conducting scientific work at the department.
Purpose of studying of the discipline
Familiarization with the latest theoretical, methodological and technological achievements of domestic and foreign science, with modern methods of scientific research, processing and interpretation of experimental data
Learning Outcomes
ON8 To apply professional knowledge and skills in the implementation of innovation policy objectives.
Learning outcomes by discipline
- to apply methods of conducting experiments, to determine the nutritional and biological value of raw materials and finished products; microstructure on an electron microscope; optical and spectral characteristics on a spectrometer; rheological parameters on a "Structurometer" device
- to master the methods of determination of physico-chemical, structural-mechanical, organoleptic and toxicological parameters of raw materials, materials and finished products
- assistance in the formation of skills to work with educational, scientific and methodological literature, to be able to independently carry out research to solve research and production tasks using modern equipment and methods for studying the properties of raw materials, semi-finished products and finished products
Prerequisites
Basic and profile disciplines of the EP
Postrequisites
Final examination

The research work of a student, including an internship and the implementation of a master s thesis (III)

Discipline cycle	Profiling discipline
Course	2
Credits count	9
Knowledge control form	Total mark on practice

Short description of discipline
Development of the ability to independently carry out activities in the field of education and science related to solving complex professional tasks in innovative conditions using modern research methods and methods, the latest achievements of techniques and technologies in research work
Purpose of studying of the discipline
Collection of factual material, processing, analysis and systematization of information for the dissertation work, assessment of their reliability and sufficiency to complete the work on the dissertation
Learning Outcomes
ON2 To use scientific and methodological approaches in the development and improvement of food production technology with the use of modern progressive techniques in the field of food products.
ON5 Design and carry out comprehensive research to analyze the qualitative characteristics of food products. Apply the methodological

foundations of laboratory research using modern equipment and computer systems.
ON8 To apply professional knowledge and skills in the implementation of innovation policy objectives.

Learning outcomes by discipline

- apply modern information technologies, methods of analysis and processing of experimental data
- publication of abstracts of reports, scientific articles based on the results of scientific research
- prepare the final text of the master`s thesis

Prerequisites

Basic and profile disciplines of the EP

Postrequisites

Final examination