The list of academic disciplines of the university component

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

7M071 - Engineering and engineering trades
(Code and classification of the direction of training)

0710
(Code in the International Standard Classification of Education)

M103 - Mechanics and metalworking
(Code and classification of the educational program group)

7M07103 - Technological machinery and equipment
(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 Muratbayev A.

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
- 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 activities.

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

Final examination

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

• Has information about the current state of psychological theory and practice to the extent optimal for use in subsequent professional activities.
• Demonstrates knowledge of the main aspects of management psychology; the need to understand their own prospects for managerial growth
- 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

Technological machines and equipment –development prospects

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

Short description of discipline

The discipline is designed to get acquainted with the most promising ways to improve the basic types and types of machines and equipment in the dairy and meat industries. The main emphasis in the study of these types of equipment is based on the commonality of the device of the basic and target mechanisms, constituting in the aggregate actuators and working bodies, which are used in different production purposes.

Purpose of studying of the discipline

The purpose of this course is to acquire the knowledge necessary for the formation of scientific and methodological approaches in solving professional issues in the field of food technology.

Learning Outcomes

ON2 Choose the necessary research methods, modify existing ones and develop new methods based on the tasks of a particular study.
ON4 To characterize the latest theoretical, methodological and technological achievements of domestic and foreign science, as well as to consolidate practical skills, the application of modern methods of scientific research, processing and interpretation of experimental data in dissertation research.

Learning outcomes by discipline

• Distinguishes between the basic concepts of measurement theory, physical quantities and units of measurement and general laws and rules of measurement
• Determines the value of using the acquired knowledge for practical purposes

Prerequisites
Methods and devices of measurement and control of parameters of technological machines
Postrequisites
Final examination

Research work of a master student, including internship and master`s thesis I

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

Short description of discipline
The research work of a master`s student, including internships and the completion of a master`s thesis, is a real preparation for future teachers, conducted in conditions very close to the high-class work of a teacher. During the practice, undergraduates draw up a project of educational work with a group of students, and also carry out the concept of classes reflecting the completed stage of the educational process based on the search for specialized subjects, as well as demonstrate mastery of advanced technologies of teaching methods.
Purpose of studying of the discipline
collection of the latest theoretical, methodological and technological achievements of domestic and foreign science, as well as consolidation of practical skills, application of modern methods of scientific research, processing and interpretation of experimental data in dissertation research.
Learning Outcomes
ON2 Choose the necessary research methods, modify existing ones and develop new methods based on the tasks of a particular study.
ON4 To characterize the latest theoretical, methodological and technological achievements of domestic and foreign science, as well as to consolidate practical skills, the application of modern methods of scientific research, processing and interpretation of experimental data in dissertation research.
ON6 Demonstrate knowledge of structures, the principle of operation, the main technical characteristics of technological machines and equipment.
Learning outcomes by discipline
• Demonstrates knowledge of structures, the principle of operation, the main technical characteristics of technological machines and equipment
Prerequisites
Basic and profile disciplines of the EP
Postrequisites
Final examination

Pedagogical practice

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

Short description of discipline
Pedagogical practice is a real training of future teachers, conducted in conditions close to the work of the teacher. During the practice, master`s students design a project of educational work with a group of students, perform the concept of classes, reflecting the completed stage of the educational process, as well as demonstrate mastery of advanced technologies of teaching methods.
Purpose of studying of the discipline
Formation of practical skills of teaching and teaching methods in higher educational institutions. Consolidation of theoretical knowledge gained in the process of training and professional development.
Learning Outcomes
ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.
Learning outcomes by discipline
• Collects the latest theoretical, methodological and technological achievements of domestic and foreign science, as well as establishes practical skills, the use of modern methods of scientific research, processing and interpretation of experimental data in dissertation research
Prerequisites
Basic and profile disciplines of the EP
Postrequisites
Final examination

Research work of a master student, including internship and master`s thesis II

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

Short description of discipline
The research work of a master`s student, including internships and the completion of a master`s thesis, is a real preparation for future teachers, conducted in conditions very close to the high-class work of a teacher. During the practice, undergraduates draw up a project of educational work with a group of students, and also carry out the concept of classes reflecting the completed stage of the educational process based on the search for specialized subjects, as well as demonstrate mastery of advanced technologies of teaching methods.
Purpose of studying of the discipline
collection of the latest theoretical, methodological and technological achievements of domestic and foreign science, as well as

consolidation of practical skills, application of modern methods of scientific research, processing and interpretation of experimental data in dissertation research.

Learning Outcomes

ON2 Choose the necessary research methods, modify existing ones and develop new methods based on the tasks of a particular study.
ON4 To characterize the latest theoretical, methodological and technological achievements of domestic and foreign science, as well as to consolidate practical skills, the application of modern methods of scientific research, processing and interpretation of experimental data in dissertation research.
ON6 Demonstrate knowledge of structures, the principle of operation, the main technical characteristics of technological machines and equipment.

Learning outcomes by discipline

Demonstrates knowledge of structures, the principle of operation, the main technical characteristics of technological machines and equipment

Prerequisites

Basic and profile disciplines of the EP

Postrequisites

Final examination

Research practice

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

Short description of discipline

Research practice is a type of research work focused on strengthening the systematization of theoretical and methodological training of a graduate student, the actual mastering of the technology of research work, as well as improving the actual ability to perform scientific and experimental activities in accordance with the requirements for the level of training of a master of technical Sciences. In the course of practice, undergraduates are given the chance to perform experimental studies according to a previously researched plan that takes into account the problems of the master`s thesis.

Purpose of studying of the discipline

Theoretical and experimental work related to the dissertation

Learning Outcomes

ON2 Choose the necessary research methods, modify existing ones and develop new methods based on the tasks of a particular study.
ON4 To characterize the latest theoretical, methodological and technological achievements of domestic and foreign science, as well as to consolidate practical skills, the application of modern methods of scientific research, processing and interpretation of experimental data in dissertation research.
ON6 Demonstrate knowledge of structures, the principle of operation, the main technical characteristics of technological machines and equipment.

Learning outcomes by discipline

-Perform experimental research
-Writing dissertations

Prerequisites

Basic and profile disciplines of the EP

Postrequisites

Final examination

Research work of a master student, including internship and master`s project III

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

Short description of discipline

The research work of a master`s student, including internships and the completion of a master`s thesis, is a real preparation for future teachers, conducted in conditions very close to the high-class work of a teacher. During the practice, undergraduates draw up a project of educational work with a group of students, and also carry out the concept of classes reflecting the completed stage of the educational process based on the search for specialized subjects, as well as demonstrate mastery of advanced technologies of teaching methods.

Purpose of studying of the discipline

collection of the latest theoretical, methodological and technological achievements of domestic and foreign science, as well as consolidation of practical skills, application of modern methods of scientific research, processing and interpretation of experimental data in dissertation research.

Learning Outcomes

ON2 Choose the necessary research methods, modify existing ones and develop new methods based on the tasks of a particular study.
ON4 To characterize the latest theoretical, methodological and technological achievements of domestic and foreign science, as well as to consolidate practical skills, the application of modern methods of scientific research, processing and interpretation of experimental data in dissertation research.
ON6 Demonstrate knowledge of structures, the principle of operation, the main technical characteristics of technological machines and equipment.

Learning outcomes by discipline

• Demonstrates the skills of scientific research on a formulated topic, obtaining new scientific and applied results, their analysis, systematization, generalization and presentation in the form of a master's project

Prerequisites

Basic and profile disciplines of the EP

Postrequisites

Final examination