The list of academic disciplines of the university component

7M01 - Pedagogical sciences
(Code and classification of the field of education)

7M015 - Teacher training in natural science subjects
(Code and classification of the direction of training)

0114
(Code in the International Standard Classification of Education)

M014 - Training of teachers of biology (kazakh, russian, english language)
(Code and classification of the educational program group)

7M01505 - Biology
(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 Mukaev Zh. T.
EP Manager Sadykova R.A.

Reviewed
At the meeting of the Quality Assurance Commission
Natural and Mathematical of the faculty
Recommended to be for approved
by the Academic Council of the University
Record No 4.1 "04" April 2023 y.
Chairman of the Commission _____

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
Research practice

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

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

Pedagogical practice

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

Pedagogical practice

Organization and plan research work

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

Short description of discipline

This discipline studies the principles of fundamental and applied research. When studying the course, undergraduates form systemic knowledge about scientific areas, about the formulation of the goal and objectives of research in biology, about the tasks of theoretical and experimental research. on the analysis and design of scientific research, on the implementation and effectiveness of scientific research, on the technologies of scientific research, on scientific projects.

Purpose of studying of the discipline

Finding a certain object, studying its structure, characteristics, connections on the basis of positions and methods of cognition developed in science, as well as obtaining important results for human activity.

Learning Outcomes

ON2 Apply knowledge of the theoretical and methodological foundations of scientific research in pedagogy and in a special field. Demonstrate methods of implementing research results into practical pedagogical activity.
ON6 To plan and carry out a scientific experiment, to logically argue scientific conclusions.

Learning outcomes by discipline

1. Uses the acquired knowledge in his research work; determine the goals and objectives of scientific research; organize the search for information, data collection;
2. Prepare the results; work with literature formalize the results of research work; plan, prepare and deliver a presentation.
3. Owns the methodology of scientific research. Uses methods of theoretical and experimental research, processing of experimental results in modern packages of biological applied programs.

Prerequisites

History and philosophy of science

Postrequisites

Research practice

Research activity of students in biology

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

Short description of discipline
This course teaches you to ask questions and teaches you to find answers. The introduction of research methods in the teaching of biology helps to increase the motivation for learning. To educate a creative person who is able to independently acquire knowledge and skills, freely use them in their activities. Formation of research literacy: development of the ability to independently analyze and evaluate information of any type and complexity, as well as scientific literature.

Purpose of studying of the discipline
Ensuring a high level of theoretical and practical training of the future teacher in the field of biology as a person who is able to realize the possibilities of the educational environment to achieve learning and upbringing results, taking into account the characteristics and needs of students.

Learning Outcomes
ON2 Apply knowledge of the theoretical and methodological foundations of scientific research in pedagogy and in a special field. Demonstrate methods of implementing research results into practical pedagogical activity.
ON5 To predict the results of scientific research in the context of social, economic, environmental consequences of the introduction of scientific results into practice.

Learning outcomes by discipline
1. Apply modern methods and technologies for organizing research and project activities of students, as well as assessing the quality of the educational process;
2. To form a developing educational environment in the implementation of the tasks of innovative educational policy through the use of project activities of students and the organization of research work, including joint work with a teacher;
3. Use knowledge of modern problems of science and education in solving professional problems.

Prerequisites
History and philosophy of science

Postrequisites
Final examination

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
Research work of a master student of undergraduates is a mandatory component of the educational program, forms professional competencies, organizes training in the theory and practice of conducting scientific research and allows conducting scientific research under the supervision of a supervisor according to assignments. It develops creative thinking among undergraduates, teaches to identify areas and objects of research, as well as to select and systematize information sources on the topic of research.

Purpose of studying of the discipline
To gain practical skills in conducting scientific research; formation of creative thinking and skills to identify areas and objects of research; to select and systematize information sources on the topic of research.

Learning Outcomes
ON5 To predict the results of scientific research in the context of social, economic, environmental consequences of the introduction of scientific results into practice.
ON6 To plan and carry out a scientific experiment, to logically argue scientific conclusions.

Learning outcomes by discipline
-demonstrate professional competencies and organize training in the theory and practice of scientific research;
- think creatively; -highlight areas and objects of research;
-to select, analyze and systematize information sources on the research topic.

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 an important practical component of the educational program, aimed at consolidating theoretical knowledge and acquiring practical skills and competencies by undergraduates in the process of pedagogical activity. During the course of pedagogical

practice, undergraduates master the main functions of pedagogical activity, including the functions of design, construction, organization and socio-psychological regulation, develop knowledge and skills of teaching biological disciplines.

Purpose of studying of the discipline

Consolidation of theoretical knowledge and formation and development of professional knowledge and skills of teaching biological disciplines among undergraduates.

Learning Outcomes

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

Learning outcomes by discipline

1. analyze and evaluate the training sessions of teachers of the department, other undergraduates, participate in their collective discussion, conduct self-analysis, self-assessment of the process and results of practical pedagogical activity;
2. creatively generalize, structure, transform and put into practice advanced scientific and pedagogical experience, traditional and innovative technologies of higher education;
3. Demonstrate the skills of pedagogical communication, analysis, design, implementation, evaluation and correction of the educational process

Prerequisites

Biology teaching technology in secon dary vocational and university

Postrequisites

Final examination

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

Research work is a prerequisite for the preparation of undergraduates. It is aimed at the formation of professional skills through the independent organization and conduct of scientific research, the ability to extract scientific information and analyze it, the choice of priority and relevant research methods that allow obtaining reliable material. Allows you to implement the practical skills of writing scientific articles and to carry out analytical work in the processing of research materials.

Purpose of studying of the discipline

Formation of professional skills of independent organization and conduct of scientific research; skills of writing scientific articles and conducting analytical work when processing research materials.

Learning Outcomes

ON2 Apply knowledge of the theoretical and methodological foundations of scientific research in pedagogy and in a special field. Demonstrate methods of implementing research results into practical pedagogical activity.
ON5 To predict the results of scientific research in the context of social, economic, environmental consequences of the introduction of scientific results into practice.
ON6 To plan and carry out a scientific experiment, to logically argue scientific conclusions.

Learning outcomes by discipline

-demonstrate professional skills of independent organization and conducting scientific research;
-to extract scientific information and analyze it;
-evaluate priority and relevant research methods;
- write a scientific article and conduct analytical work when processing research materials.

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 an integral part of the main educational program of the master`s program. Research practice in the field of master`s degree in pedagogical sciences is aimed at the formation and improvement of the research competencies of undergraduates in the field of experimental work on a master`s thesis, as well as the use of diagnostic methods. research,scientific articles, textbooks.

Purpose of studying of the discipline

The purpose of the research practice is the acquisition, development and application of professional knowledge in the chosen field of study and in the course of working on a dissertation.

Learning Outcomes

ON2 Apply knowledge of the theoretical and methodological foundations of scientific research in pedagogy and in a special field. Demonstrate methods of implementing research results into practical pedagogical activity.
ON5 To predict the results of scientific research in the context of social, economic, environmental consequences of the introduction of scientific results into practice.
ON6 To plan and carry out a scientific experiment, to logically argue scientific conclusions.

Learning outcomes by discipline

As a result of mastering the discipline, the undergraduate:
The ability to critically analyze and evaluate modern scientific achievements, the generation of new ideas in the course of research and

solving practical problems, including in interdisciplinary areas
The ability to independently carry out research activities in the relevant professional field using modern tools, research methods and information and communication technologies
Knowledge of existing modern theoretical and experimental research methods the goal of creating new promising biologically active producers compounds, their practical use and implementation of the results research, fundamentals of experiment planning, mathematical methods data processing

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
Research work allows you to consolidate, systematize and expand knowledge of the latest scientific achievements in the field of biology and teaching methods. Develops the ability to formulate and solve scientific problems, increasing the level of research competence of the undergraduate. Forms scientific thinking, a clear idea of the subject and the main professional tasks and ways to solve them. Teaches methods of conducting bibliographic work on the basis of modern information technologies.

Purpose of studying of the discipline
Forms the skills of solving scientific problems, setting professional tasks and finding ways to solve them. Teaches methods of conducting bibliographic work based on modern information technologies.

Learning Outcomes
ON6 To plan and carry out a scientific experiment, to logically argue scientific conclusions.
ON7 To use the acquired knowledge and skills to solve topical environmental, economic and social problems.
ON8 Critically analyze existing concepts, theories and approaches to the analysis of processes and phenomena, integrate knowledge gained in different disciplines to solve research problems in new unfamiliar conditions.

Learning outcomes by discipline
- to systematize, consolidate and expand knowledge about modern achievements of science and practice in the field of biology education;
-demonstrate high skills in staging and conducting an experiment;
-argumentatively prove their own experimental conclusions;
-analyze the results of their own research and compare them with literary sources.

Prerequisites
Basic and profile disciplines of the EP

Postrequisites
Final examination