

ANNOTATIONS OF THE WORKING PROGRAMMES OF THE PRACTICES  
“BIODIVERSITY” MASTER PROGRAMME  
SUBJECT 06.04.01 – «BIOLOGY»

**U2. Practice including research work**

**Variable part**

**Obtaining of primary professional skills (Educational practice)**

Educational practice is a component of Unit 2 "Practices" and it is mandatory for all students.

*Educational practice is aimed at the formation of the following competencies:*

general professional competence:

GPC–4 - the ability to independently analyze available information, identify fundamental problems, set the task and perform field, laboratory biological research in solving specific problems using modern equipment and computing facilities, be responsible for the quality of work, and the scientific reliability of the results

*The main stages of educational practice:*

1. Introductory briefing. Introduction to the practice plan.
2. Familiarity with the methodological literature on the research topic
3. The development of research methods
4. Approval of the theme of the master's thesis
5. Preparation and approval of individual master's thesis plan.
6. Providing information from the supervisor on the results of educational practice.

*Method of educational practice conducting:* Stationary

**Obtaining of professional skills and professional practice (Internships)**

Obtaining of professional skills and professional practice is a component of Unit 2 "Practices" and it is mandatory for all students.

*Obtaining of professional skills and professional practice is aimed at the formation of the following competencies:*

General professional competence:

GPC–2 - readiness to lead a team in the sphere of their professional activity, tolerantly perceiving social, ethnic, confessional and cultural differences;

GPC–3 - readiness to use fundamental biological ideas in the sphere of professional activity for setting and solving new tasks;

GPC–4 - the ability to independently analyze available information, identify fundamental problems, set the task and perform field, laboratory biological research in solving specific problems using modern equipment and computing facilities, be responsible for the quality of work, and the scientific reliability of the results;

GPC–7 - readiness to creatively apply modern computer technologies in collecting, storing, processing,

GPC–9 - analyzing and transferring biological information for solving professional problems; the ability to professionally design, present and report the results of scientific research and vocational work on approved forms.

Professional competencies:

PC–1 - The ability to creatively use knowledge of the fundamental and applied sections of disciplines (modules) that determine the direction (profile) of the master's programme in scientific and industrial-technological activities;

PC–2 - The ability to plan and implement professional activities (in accordance with the direction [profile] of the master's programme);

PC–3 - The ability to apply the methodological basis for designing, performing field and laboratory biological, ecological studies, using modern equipment and computing complexes of the event (in accordance with the direction (profile) of the master's programme);

PC–4 - Ability to generate new ideas and methodological solutions;

***The main stages of obtaining of professional skills and professional practice:***

The preparatory stage includes training and certification on safety, preparation and approval of individual programme of practice, individual tasks. Search and analysis of literature on the subject of research.

The internship (laboratory) stage includes instructing at the enterprise; acquaintance with the organization (enterprise), rules of internal labor regulations; performance of field, experimental works; collecting, processing and systematization of the actual material, measurements, etc.; the Head from the organization makes the response-the characteristic on the graduate student.

The reporting stage. Practice dairy is formalized. The head of the organization is a review-characteristic of the Intern. The report on practice which is given together with the diary and the response-the characteristic from the head of practice on production (in the organization) on Department of Cytology and genetics to the scientific head is made. The report with presentation for protection of the report for 5-7 minutes is made.

***Method of Obtaining of professional skills and professional practice conducting:*** Exit / stationary

**Undergraduate practice**

Undergraduate practice is a component of Unit 2 "Practices" and it is mandatory for all students.

***Undergraduate practice is aimed at the formation of the following competencies:***

General professional competence:

GPC–4 - the ability to independently analyze available information, identify fundamental problems, set the task and perform field, laboratory biological research in solving specific problems using modern equipment and computing facilities, be responsible for the quality of work, and the scientific reliability of the results;

GPC–6 - the ability to use knowledge of the fundamentals of the biosphere theory, understanding of modern biosphere processes for a systematic assessment of geopolitical phenomena and forecasting the consequences of implementing socially significant projects;

GPC–9 - analyzing and transferring biological information for solving professional problems; the ability to professionally design, present and report the results of scientific research and vocational work on approved forms.

Professional competencies:

PC–1 - The ability to creatively use knowledge of the fundamental and applied sections of disciplines (modules) that determine the direction (profile) of the master's programme in scientific and industrial-technological activities;

PC–4 - Ability to generate new ideas and methodological solutions;

***The main stages of undergraduate practice:***

Stage 1-Preparatory

Familiarization with the goals and objectives of undergraduate practice. Drawing up and approval of individual practice tasks. Correction of the master's thesis plan.

Stage 2 - Main

Execution of individual tasks of undergraduate practice. Registration of results of the performed researches. Preparation of the manuscript of the master's thesis. The study of practical experience in accordance with the theme of the master's thesis.

Stage 3-Final

Preparation of the main chapters of the master's thesis. Preparation of an oral report on the master's thesis.

***Method of undergraduate practice conducting:*** Stationary

**Research work**

Research work is a component of Unit 2 "Practices" and it is mandatory for all students.

***Research work is aimed at the formation of the following competencies:***

General professional competence:

GPC–1 - readiness for communication in oral and written forms either in the state language of the Russian Federation or a foreign language for solving professional problems;

GPC–3 - readiness to use fundamental biological ideas in the sphere of professional activity for setting and solving new tasks;

GPC–7 - readiness to creatively apply modern computer technologies in collecting, storing, processing,

GPC–9 - analyzing and transferring biological information for solving professional problems; the ability to professionally design, present and report the results of scientific research and vocational work on approved forms.

Professional competencies:

PC–1 - The ability to creatively use knowledge of the fundamental and applied sections of disciplines (modules) that determine the direction (profile) of the master's programme in scientific and industrial-technological activities;

PC–2 - The ability to plan and implement professional activities (in accordance with the direction [profile] of the master's programme);

***The main stages of research work:***

Preparation of bibliography on the theme of master's thesis.

Writing a literary review.

Organizing and conducting research on the problem, collecting empirical data and discussing them.

Writing a scientific publication on the research problem.

Presentation at the scientific conference on the problem of research.

***Method of research work conducting:*** Stationary