

THE GRADUATE MODEL OF THE MASTER OF EDUCATION IN THE EDUCATIONAL PROGRAM 7M01502 – BIOLOGY

The graduate model involves constant work on their skills, lifelong learning, and fulfilling the teacher's social mission to society. Our graduates are ready specialists to predict the rapidly changing needs of modern students.

Graduate Model

1. Applies knowledge of the basics of higher school pedagogy, management psychology, history and philosophy of science, and a foreign language in professional teaching and research activities.
2. Has knowledge about the specifics of the content of biological education at the university, demonstrates knowledge of innovative teaching methods and technologies used at the university, is able to clearly determine the place of biological sciences in the system of natural sciences.
3. Demonstrates systemic fundamental knowledge in the field of general biology, cellular and molecular biology, biotechnology and nanotechnology, bioethics in conducting scientific research, owns innovative technologies, including in the educational practice of higher education using information technology.
4. Uses modern information and digital technologies to solve the tasks of pedagogical activity, developing the skills necessary for creating digital content and digital transformation.
5. Possesses innovative methods of developing author's courses in various branches of biological sciences; methodology for the development of scientific and methodological products, educational and methodological complexes.
6. Applies in practice modern innovative technologies for teaching biological disciplines at school and university, owns modern methods based on innovative trends in teaching biology.
7. Qualitatively uses the results of modern interdisciplinary research, pedagogical diagnostics and the implementation of research results in teaching activities.
8. Possesses modern methods of planning, organizing and conducting scientific research, applies the skills of conducting modern experimental research in the field of biology, allowing to obtain new scientific facts significant for biology;

methods of introducing research results into practical pedagogical activity; mechanisms of commercialization of research results.

9. Organizes and conducts independent STEM research, critically analyzing research in the professional field, applying innovative research methods in setting and solving research problems; possesses basic knowledge and applies technologies of problem-dialogic teaching in biology lessons, forms a culture of dialogue, organizing oral and written discussions on problems requiring decision-making and conflict resolution.
10. Demonstrates applied knowledge in biology in conducting scientific research, developing innovative technologies, including in the educational practice of higher education; knows the patterns of natural science phenomena and processes in nature; conceptual and theoretical foundations of biology, its place in the general system of sciences and values, the history of development and current state.
11. Knows the methods of analysis and assessment of biodiversity at different levels of the organization of the biosphere; has knowledge of the rational use of biological resources as the basis for biodiversity conservation.
12. Has knowledge of the chemical, biochemical and molecular biological bases of immune reactions, applies skills in working with laboratory equipment; develops an algorithm for using physiological, molecular biological, immunological approaches in the course of research; applies knowledge in his professional activities.