

Name of the Discipline	Research Activities				
Semester(s)	1/2/3/4				
Responsible teacher	Azimova Dilnoz Ergashevna, Doctor of Philosophy (PhD) in Biological Sciences, Associate Professor Khamrayeva Nafisa Tirkashevna, Doctor of Philosophy (PhD) in Biological Sciences, Associate Professor Ortiqova Lola Soatovna, Doctor of Philosophy (PhD) in Agricultural Sciences, Associate Professor				
Language of teaching/learning	Uzbek, Russian				
Connection to the curriculum	Compulsory				
Forms of teaching/learning	Practical (practice)				
Academic workload (including contact hours and self-study)	Total work load: 1020 hours Contact hours lecture 0 hours practical lesson 0 hours IWS 0 Practice 1020 hours				
	Semester	1	2	3	4
	Total workload	120	180	180	540
ECTS	34				
Prerequisites					
Discipline objectives / Learning Outcomes	<p>The purpose of the discipline is to prepare a master's master for independent research work, the main result of which is the writing and successful defense of a master's thesis.</p> <p>Learning outcomes</p> <ul style="list-style-type: none">- the ability to apply methods of scientific knowledge in independent research activities, generate and implement innovative ideas;- own the methodology of scientific knowledge, be able to analyze and evaluate the content and level of philosophical and methodological problems when solving problems of research and innovation activities;- master the techniques and methods of personal and professional development of a teacher-researcher, building a professional career and pedagogical ideals, norms and principles of pedagogical and scientific ethics, individual abilities and inclinations;- design and carry out complex research, including interdisciplinary research, based on a holistic systemic scientific worldview using knowledge in the field of Biology and methods of its teaching;- have the skills to use modern information technologies to solve research and innovation problems;- carry out research activities in the field of Biology and methods of teaching it using modern research methods and information and communication technologies;- master the techniques and methods of personal and professional development of a teacher-researcher, building a professional career and pedagogical ideals, norms and principles of pedagogical and scientific ethics, individual abilities and inclinations;				

	- adapt the results of modern chemical and pedagogical research to solve methodological problems existing in the educational system.
Lessons' contents	<ol style="list-style-type: none"> 1. Selecting a topic for research work, justifying its relevance 2. Approval of a plan for research work, determination of specific volumes and directions of scientific research (drawing up and approval of an individual work plan for a master's master); 3. Preparation of an analytical review of the literature on the research topic 4. Development of experimental methodology 5. Carrying out theoretical and experimental work on the research topic 6. Material testing 7. Presentation of theoretical research results at conferences 8. Development and justification of author's proposals, principles, approaches, interpretations 9. Experimental testing 10. Preparation of text and demonstration material
The exam format	Preparation of the report and its protection
Teaching/learning and examination requirements	<p>No more than 2 days are allotted for drawing up the final report, during which undergraduates put their individual plan in order, prepare written reports, and prepare presentations. Each undergraduate submits the following materials:</p> <ul style="list-style-type: none"> - Report text; - Individual plan and characteristics from the supervisor; - Presentations of master's masters-interns in electronic form. <p>The credit for research activities (practice) is accepted by the commission in accordance with the approved order, in the presence of all undergraduates and their supervisors. During the certification, the competencies of master's masters-interns, which they mastered in the process of carrying out research activities (practice), are assessed.</p>
Bibliography	<ol style="list-style-type: none"> 1. Магистрлик диссертацияларини тайёрлаш бўйича методик тавсиянома: магистратура бўлимининг барча мутахассисликлари учун мўлжалланган. – Т: ТДПУ, 2010. – 60 б. 2. Шермухамедова Н.А. Илмий тадқиқот методологияси. – Т.: “Fan va texnologiya”, 2014. – 512 б. 3. Алемасов В., Мамадалиев Ш. Илмий тадқиқот: методология, методика ва ижодиёт. – Т.: Ўзбекистон Республикаси ИИВ Академияси, 2015. – 102 б. 4. Ranjit Kumar. Research methodology a step-by-step guide for beginners. – Sage, New Delhi, 2011. – 415 p. 5. Саифназаров И., Никитченко Г.В., Б.У.Қосимов. Илмий ижод методологияси. – Т.: Янги аср авлоди, 2004. – 190 б. 6. Тўракулов Х.А., Тўракулов О.Х., Тўракулов И.Х., Тўракулов У.Х. Илмий тадқиқот асослари: 1000 саволга 1000 жавоб. – Т.: Fan va texnologiya, 2019. – 632 б.
Master's thesis work YADA evaluation criteria	1. The volume and formalization of the MDI in terms of requirements (standard: natural areas - no less than 70 pages,

	<p>social areas - no less than 80 pages): meets the requirements - 10 points, partially meets the requirements - 7 points, there are deviations from the requirements - 4 points.</p> <p>2. The topic was selected on the basis of state and institute grant projects or on current problems: included in the state program - 8 points, according to the grant project - 7 points, according to the institute program - 6 points, according to current problems - 5 points.</p> <p>3. The relevance of the topic: sufficiently justified - 5 points, insufficiently justified - 3 points, unclear - 2 points.</p> <p>4. The clear expression of goals and objectives: clear - 7 points, not completely clear - 5 points, unclear - 3 points.</p> <p>5. The degree of use of scientific research methods in the implementation of the MDI: full - 7 points, partial - 5 points, insufficient - 3 points.</p> <p>6. The degree of novelty and reliability of the results obtained: the result is new - 8 points, previously obtained - 6 points, not fully reliable - 3 points.</p> <p>7. The presence of recommendations for production in the conclusion of the MDI: there is a recommendation for direct production - 6 points, recommended for use in the social sphere (education, environmental protection, spiritual and educational ...) - 5 points, no recommendation - 3 points.</p> <p>8. The degree of critical assessment of the graduate's results on the topic: clear - 8 points, not completely clear - 6 points, not critically assessed - 4 points.</p> <p>9. The scientific nature of the work: based on scientific research - 8 points, in a mixed form - 5 points, in a referential nature - 3 points.</p> <p>10. Level of use of literature: full use of scientific and practical journals, monographs, works of leading scientists - 8 points, limited use of scientific literature - 6 points, only textbooks, lecture notes, manuals and reference books - 4 points.</p> <p>11. Grading of the graduate's report: excellent - 10 points, good - 7 points, satisfactory - 6 points.</p> <p>12. Answers to the questions: complete - 8 points, average - 6 points, satisfactory - 4 points.</p> <p>13. Evaluation of the MDI by an external reviewer: excellent - 7 points, good - 6 points, satisfactory - 5 points.</p> <p>14. The final score assigned to the MDI is points.</p>
<p>Evaluation of the State Attestation in Specialized Subjects</p> <p>C R E T I N E</p>	<p>70110901 - Procedure and evaluation criteria for state certification of graduating masters in the specialty of teaching exact and natural sciences (Biology)</p> <p>The time allotted for the written tests of the State Attestation of the State Examination is 1 hour and 30 minutes.</p> <p>The overall mastery index for the State Attestation in specialized subjects is estimated from 60 to 100 points.</p> <p>There are 5 questions in one option, and a maximum of 20 points are awarded for each correct answer.</p> <p>Each written answer in the State Attestation is evaluated based</p>

on the following criteria:

- if the correct and complete answer to the given question is written, the content and essence of the question are correctly and consistently covered, as well as if the approach is creative, and the logical integrity of the answer is achieved, the mastery index is evaluated in the range of 17.1 - 20 points;
 - if the correct answer to the given question is written, the content of the question is fully covered, the mastery index is evaluated in the range of 14.1 - 17 points;
 - if the oral answer to the given question is incorrect or superficial, but the content of the given question is not fully explained, the mastery indicator is evaluated in the range of 11-14.1 points;
 - if the answer to the given question is incorrect or superficial, but the essence of the problem is not fully explained, the mastery indicator is evaluated in the range of 0 - 10.9 points.
- (17.1-20 points - excellent, 14-17 points - good, 11-14.1 points - satisfactory, 0-10.9 points - unsatisfactory).

5 stars	100 points		Evaluation criteria
5	90-100	Excellent	When a student is considered to be independent conclusions and decisions creatively, observe independently knowledge he has gained in practice, know, express, and narrate the essence of the subject (subject), and have an idea about the subject (subject)
4	70-89,9	Good	When the student is considered to be able to observe independently, apply the knowledge he has gained in practice, understands, knows, can express, and narrate the essence of the subject (subject), and has an idea about the subject (subject)
3	60-69,9	Satisfactory	When the student is found to be able to apply knowledge he has gained understands, knows, can express, and narrate the essence of the subject (subject), and has an idea about the subject (subject)
2	0-59,9	Unsatisfactory	When it is determined that the student has not mastered the science program, does not understand the essence of the science, and does not have an idea about the subject (subject)

NOTE: Graduates who are dissatisfied with the grade given during the final state attestation process have the right to appeal to the appeal commission within 24 hours from the date of announcement of the final state attestation scores. Any problems that may arise between the final state attestation commission and the student regarding the assessment scores will be considered by a special appeal commission and concluded in agreement with the chairman of the SAC.

Evaluation criteria for the final

The volume and formalization of the BMI in terms of

qualification work	<p>requirements (norm: natural areas - no less than 50 pages, social areas - no less than 70 pages): meets the requirements - 10 points, partially meets the requirements - 7 points, there are deviations from the requirements - 4 points.</p> <p>2. The topic was selected on the basis of state and institute grant projects or on current problems: included in the state program - 8 points, according to the grant project - 7 points, according to the institute program - 6 points, according to current problems - 5 points.</p> <p>3. The relevance of the topic: sufficiently justified - 5 points, insufficiently justified - 3 points, unclear - 2 points.</p> <p>4. The clear expression of goals and objectives: clear - 7 points, not completely clear - 5 points, unclear - 3 points.</p> <p>5. The degree of use of scientific research methods in the implementation of the BMI: full - 7 points, partial - 5 points, insufficient - 3 points.</p> <p>6. The degree of novelty and reliability of the results obtained: the result is new - 8 points, previously obtained - 6 points, not fully reliable - 3 points.</p> <p>7. The presence of recommendations for production in the conclusion of the BMI: there is a recommendation for direct production - 6 points, recommended for use in the social sphere (education, environmental protection, spiritual and educational ...) - 5 points, no recommendation - 3 points.</p> <p>8. The degree of critical assessment of the graduate's results on the topic: clear - 8 points, not completely clear - 6 points, not critically assessed - 4 points.</p> <p>9. The scientific nature of the work: based on scientific research - 8 points, in a mixed form - 5 points, in a referential nature - 3 points.</p> <p>10. Level of use of literature: full use of scientific and practical journals, monographs, works of leading scientists - 8 points, limited use of scientific literature - 6 points, only textbooks, lecture notes, manuals and reference books - 4 points.</p> <p>11. Grading of the graduate's report: excellent - 10 points, good - 7 points, satisfactory - 6 points.</p> <p>12. Answers to the questions: complete - 8 points, average - 6 points, satisfactory - 4 points.</p> <p>13. Assessment of the BMI by an external reviewer: excellent - 7 points, good - 6 points, satisfactory - 5 points.</p> <p>14. The final score assigned to the BMI is points.</p>
--------------------	---