

Name of the Discipline	Scientific and Pedagogical 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														
Connection to the curriculum	Compulsory														
Forms of teaching/learning	Practical (practice)														
Academic workload (including contact hours and self-study)	Total work load: 600 hours Contact hours lecture 0 hours practical lesson 0 hours IWS 0 Practice 600 hours														
	<table><tr><td>Semester</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>Total workload</td><td>120</td><td>180</td><td>120</td><td>180</td></tr></table>					Semester	1	2	3	4	Total workload	120	180	120	180
	Semester	1	2	3	4										
Total workload	120	180	120	180											
ECTS	20														
Prerequisites															
Discipline objectives / Learning Outcomes	<p>The purpose of the discipline is to acquire practical skills in teaching; the formation of professional competence, manifested in the readiness to develop models of Biology classes, analyze them taking into account psychological, pedagogical and scientific-methodological requirements.</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;- have the skills to use modern information technologies to solve research and innovation problems;- the ability to carry out pedagogical activities in educational institutions, to master and implement effective educational and information and communication technologies, pedagogical innovations;- 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, etc.														
Lessons’ contents	<p>Content</p> <p>1. Current problems of vocational education, innovative and scientific-pedagogical activities</p> <p>2.Methodology of scientific and pedagogical research</p> <p>3.Information and communication technologies in scientific, pedagogical and innovative activities</p>														

	4.Инновации в истории образования как движущий фактор развития 5.Pedagogy and psychology of higher education 6.Management in Education 7.Teacher's personal effectiveness 8.Innovative approaches and technologies in education 9.Socialization and education in the context of global challenges and risks			
The exam format	Preparation of the report and its protection			
Teaching/learning and examination requirements	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: - Text of the report; -Individual plan and characteristics from the manager; - Presentations of master's masters-interns in electronic form. The credit for scientific and pedagogical 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 scientific and pedagogical activities (practice), are assessed.			
Bibliography	1. Магистрлик диссертацияларини тайёрлаш бўйича методик тавсиянома: магистратура бўлимнинг 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.			
CRITERIA for evaluating the tasks performed by students during their Master's degree scientific practice and research work and master's thesis preparation practice	T/r	Name of events and tasks	Allocated points	Report form
	1.	Participation in a scientific and methodological conference dedicated to practice at the graduate school	0-1	Based on photographs and an internship diary, the student participated in a scientific and methodological conference dedicated to internships at the graduate school.
	2.	Roundtable discussion with the head of their assigned practice	0-1	Based on the photos and practice diary of the roundtable discussion held
	3.	Familiarization with the internal regulations and activities of the department where the internship will take place	0-1	Based on the department's internal regulations and activities, a reference book, photographs, and a practice diary.
	4.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis

				form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	5.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	6.	Work with regulatory documents of the head of the attached practice.	0-1	Copies of the practice manager's regulatory documents and the practice diary
	7.	Studying the level of equipment of auditoriums	0-1	Based on a certificate, photographs, and a practice diary confirming that the selected classroom is equipped in accordance with the specialty
	8.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	9.	Familiarization with regulatory documents of relevant educational areas and specialties, including curricula and programs, and educational and methodological complexes	0-1	Based on copies of regulatory documents of relevant educational areas and specialties and keeping a practice diary.
	10.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	11.	Study and prepare a reference book on the specialized education systems of developed countries.	0-1	On the basis of the competition, the education systems of developed countries are studied and a reference book is prepared. Based on the practice diary
	12.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	13.	Participate in the development of pedagogical technologies and the preparation of teaching methods in a given subject	0-1	Based on examples of pedagogical technologies and keeping a practice diary.

	14.	Study the process of preparing for a practice leader's lesson.	0-1	Based on the preparation of a reference book and keeping a practice diary in preparation for the lesson process.
	15.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	16.	Developing skills in working with educational platforms available at the university (Hemis information system, Main.jdpu.uz)	0-1	Based on screenshots from educational platforms and keeping a practice diary.
	17.	Creating an event script and organizing an event on the occasion of the "Teachers and Mentors Day" on October 1	0-1	Based on a prepared and approved event script and photographs based on a specified template
	18.	Organize a contest, competition, or event on the "Five Important Initiatives"	0-1	Based on the schedule of organized competitions and competitions, a reference book, photographs, and a practice diary.
	19.	Prepare a methodological guide for practical exercises together with the practice leader.	0-1	Based on the electronic form of the methodological manual and the maintenance of a practice diary
	20.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	21.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	22.	Preparing assignments on a relevant topic using modern pedagogical technologies	0-1	Based on assignments prepared using modern pedagogical technologies and keeping a practice diary on the relevant topic
	23.	Get acquainted with the activities of the clubs available at the department	0-1	Based on the Charter and program of the organized circles and the maintenance of the practice diary
	24.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.

	25.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	26.	Get acquainted with the activities of the university library, study library activities, and work with available literature.	0-1	Based on the information, photographs, and practice diary about the library activities at the university
	27.	Preparing a conclusion on the professor's work with students during the lesson	0-1	Summary of the professor's work with students, photographs, and keeping a practice diary
	28.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	29.	Preparing assignments on a relevant topic using modern pedagogical technologies	0-1	Based on assignments prepared using modern pedagogical technologies and keeping a practice diary on the relevant topic
	30.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	31.	Studying the maintenance of educational and regulatory documents established in departments	0-1	Based on copies of educational and regulatory documents and keeping a practice diary
	32.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	33.	Monitoring and analyzing students' leisure activities	0-1	Keeping a reference book, photographs, and practice diary on the results of observing and analyzing students' leisure activities.
	34.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	35.	Creating a script and organizing an event on the occasion of October 21, the day when the	0-1	Based on a specific template and approved event script, photographs, and a practice diary

		Uzbek language was granted the status of the state language		
	36..	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	37.	Organizing a survey to determine the relevance of a master's thesis	0-1	Based on the survey conducted and its results, a report, photographs, and a practice diary
	38.	Familiarization with regulatory documents of relevant educational areas and specialties, including curricula and programs, and educational and methodological complexes	0-1	Based on copies of regulatory documents of relevant educational areas and specialties and keeping a practice diary.
	39.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	40.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	41.	Preparing assignments on a relevant topic using modern pedagogical technologies	0-1	Based on assignments prepared using modern pedagogical technologies and keeping a practice diary on the relevant topic
	42.	Organizing a roundtable discussion on internship processes with the internship supervisor and graduate students.	0-1	Roundtable discussion photos and practice diary maintenance
	43.	Practical mastery of innovative pedagogical and information and communication technologies;	0-1	Examples of innovative pedagogical and information and communication technologies and keeping a practice diary.
	44.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was

			based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	45.	Working with a dissertation	0-1 Based on the completed part of the dissertation and the maintenance of the internship diary
	46.	Analysis of the literature used in the dissertation	0-1 Keeping a bibliography, reference list, and practice diary
	47.	Working with a dissertation	0-1 Based on the completed part of the dissertation and the maintenance of the internship diary
	48.	Lesson analysis	0-1 The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	49.	Study and prepare a reference book on the specialized education systems of developed countries.	0-1 The education systems of developed countries are studied on a competitive basis and a reference book is prepared. Keeping a practice diary
	50.	Working with a dissertation	0-1 Based on the completed part of the dissertation and the maintenance of the internship diary
	51.	Familiarization with regulatory documents of relevant educational areas and specialties, including curricula and programs, and educational and methodological complexes	0-1 Based on copies of regulatory documents of relevant educational areas and specialties and keeping a practice diary.
	52.	Lesson analysis	0-1 The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	53.	Organizing an open lesson	0-1 Based on the materials of the open lesson held (announcement, presentation, handouts and visual aids) and the practice diary.

	54.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	55.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	56..	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	57.	Create presentations, tests, and questions on a relevant topic	0-1	Based on a presentation developed in a prescribed manner, 20 tests and 20 questions, and keeping a practice diary.
	58.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary.
	59.	Creating a scenario and organizing an event on the occasion of the adoption of the national flag of the Republic of Uzbekistan on November 18	0-1	Based on a specific template and approved event script, photographs, and a practice diary
	60.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	61.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	62.	Analysis of the literature used in the dissertation	0-1	Based on the list of literature, reference list, and practice diary
	63.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary

	64.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	65.	Organizing an open lesson	0-1	Based on the materials of the open lesson held (announcement, presentation, handouts and visual aids) and the practice diary.
	66.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	67.	Studying the maintenance of educational and regulatory documents established in departments	0-1	Based on copies of educational and regulatory documents and keeping a practice diary
	68.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	69.	Preparing assignments on a relevant topic using modern pedagogical technologies	0-1	Based on assignments prepared using modern pedagogical technologies and keeping a practice diary on the relevant topic
	70.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	71..	Get acquainted with the activities of the clubs available at the department	0-1	Based on the Charter and program of the organized circles and the maintenance of the practice diary
	72.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	73.	Organizing the intellectual game "Intelligence"	0-1	A plan for organizing an intellectual game based on a plan, script, photographs, and a practice diary

	74.	Analyze the work completed during the internship process during the semester together with the internship supervisor	0-1	Based on the prepared report, photographs, and practice diary on the work carried out during the semester
	75.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	76.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	77.	Creating a scenario and organizing an event on the occasion of the adoption of the Constitution of the Republic of Uzbekistan on December 8	0-1	Based on a specific template and approved event script, photographs, and a practice diary
	78.	Organizing an open lesson	0-1	Materials related to the open lesson held (Announcement, presentation, handouts and visual aids) and keeping a practice diary.
	79.	Creating a scenario for an event dedicated to the adoption of the National Anthem of the Republic of Uzbekistan	0-1	Event script, photos, and practice diary maintenance
	80.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	81.	Applying the methodological part of the master's research into practice	0-1	Maintaining approved regulatory documents and practice logs
	82.	Organizing a roundtable discussion on internship processes with the internship supervisor and graduate students.	0-1	Roundtable discussion photos and practice diary maintenance
	83..	Get acquainted with the activities of the university library, study	0-1	Universitetdagi kutubxona faoliyati to'g'risida ma'lumotnoma, fotolavhalar hamda amaliyot

		library activities, and work with available literature.		kundaligining yuritilishi asosida
	84.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	85.	Organizing an open lesson	0-1	Materials related to the open lesson held (Announcement, presentation, handouts and visual aids) and keeping a practice diary.
	86.	Preparing assignments on a relevant topic using modern pedagogical technologies	0-1	Based on assignments prepared using modern pedagogical technologies and keeping a practice diary on the relevant topic
	87.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	88.	Lesson analysis	0-1	The analyzed lesson was analyzed based on the compliance of the lesson schedule for that day (based on information from the Hemisdan information system), the analysis was based on a sample lesson analysis form, and the presentation, visual aids, handouts, photographs, and the maintenance of a practice diary were included.
	89.	Working with a dissertation	0-1	Based on the completed part of the dissertation and the maintenance of the internship diary
	90.	Preparing a conclusion on the completion of operational processes	0-1	Summary prepared by the graduate student and keeping a practice diary
	91	The master's student's compliance with the university's internal regulations and activity during the internship.	0-10	Based on a confirmed registration
	Note: 1. Assignments are prepared in handwritten form and are approved by the student with a signature on each page. 2. The assignment is prepared based on a prescribed sample and approved by the relevant authorities. 3. Completed assignments will not be evaluated if they do not meet the assessment criteria.			