

Name of Disciplines	Current Problems of Biology
Semester(s)	3
Responsible teacher	Khamrayeva Nafisa Tirkashevna, Doctor of Philosophy (PhD) in Biological Sciences, Associate Professor
Language of teaching/learning	Uzbek
Connection to the curriculum	Optional
Academic workload (including contact hours and self-study)	(Approximately) Total workload: 120 hours Contact hours - lecture 30 hours practical 30 hours Independent 60 hours
ECTS	4
Prerequisites	Botany, Zoology, Chemistry, Human anatomy and physiology, Biochemistry, Genetics and fundamentals of selection, Molecular biology, Solving problems and assignments in biology
Discipline objectives / learning outcomes	<p>Goals and objectives The purpose of the discipline is to deepen basic knowledge in biology and focus on the formation and development of basic educational competencies in the course of solving biological problems.</p> <p>Learning outcomes:</p> <ul style="list-style-type: none"> - evaluate modern approaches and innovations in teaching the methodological foundations of solving problems in Biology; cite sources of scientific articles and dissertations on the chosen research topic; - be able to classify sources of information related to scientific research when writing a master's thesis; - monitor the results of scientific and scientific-methodological research; - draw up diagrams, tables, drawings of the results of research and scientific-methodological work; - evaluate methods for solving biological problems; - compare similarities and differences of biological phenomena and processes by solving problems; - classify laws that occur in living organisms, solving problems; - debate the results of implementing a method for solving biological problems; - test modern approaches and innovations in professional activities; - prove vital processes in a living organism by solving biological problems.
Contents of classes	<ol style="list-style-type: none"> 1. Types, criteria for selecting tasks and exercises used in teaching topics related to the plant world. 2. Methods for solving problems and exercises on plant organs. 3. Features of tasks and exercises used in teaching topics related to the animal world, development of independent and creative thinking skills of masters. 4. Methods for solving problems and exercises by types of the animal world. 5. Features of tasks and exercises used in teaching topics related to the structure of the human body. 6. Solving problems and exercises related to the structure and physiology of the human organ system. 7. Features of tasks and exercises used in teaching Biology in high school. 8. Methods for solving problems and exercises on proteins, carbohydrates and

	<p>lipids.</p> <p>9-10. Methodological features of solving problems and exercises on nucleic acids.</p> <p>11. Features of solving problems and exercises on plastic and energy metabolism.</p> <p>12. Solving problems and exercises for the individual development of organisms.</p> <p>13. Solving problems and exercises for the individual development of organisms.</p> <p>14. Solving problems and exercises on ecology.</p> <p>15. Methodology for solving Olympiad problems and exercises in biology.</p>
The exam format	writing
Requirements for education and exams	<p>In drawing up final exam questions, deviations from the content of the discipline program are not allowed. The bank of final exam questions for each subject is discussed at the meeting and approved by the head of the department.</p> <p>In compiling final exam tickets, the final exam question bank is used, the number (3-5 questions) of questions in the ticket should be in a 50/50 ratio, depending on the content of classroom and independent learning.</p> <p>No later than a week before the start of the final control, tickets signed by the head of the department, enclosed in an envelope, are sealed by the dean's office, and opened 5 minutes before the start of the exam in the presence of masters.</p> <p>Final exam duration is 80 minutes. Answers to final exam questions are recorded in notebooks with the seal of the dean's office. After completion of the final exam work, the work is immediately encrypted by a representative of the dean's office, and the notebooks are handed over to the commission for verification. From the moment of completion of the final exam, a period of 72 hours is allotted for checking and posting the results on the electronic platform.</p> <p>The teacher who taught masters in this discipline is not involved in the process of conducting the exam and checking masters' answers.</p> <p>Master(s) who are dissatisfied with the final exam results may submit a written or oral appeal within 24 hours of the publication of the final exam results. Complaints submitted after 24 hours from the publication of the final exam results will not be accepted.</p>
Bibliography	<ol style="list-style-type: none"> 1. Raxmatov U.E., Shaxmurova G.A., Azimov I.T. Biologiyadan masala va mashqlar yechish. Darslik. "SARVAR PRINIT" nashriyoti. Toshkent-2023 y. 2. Shaxmurova G.A., Azimov I.T., Raxmatov U.E. Biologiyadan masala va mashqlar yechish. "Sano-standart" nashriyoti. Toshkent-2017 y. 3. Raxmatov U.E. Biologiyadan masala va mashqlar yechish. "Tafakkur avlodi" nashriyoti. Toshkent-2020 y. 4. G'ofurov A.T., Fayzullayev S.S., Azimov I.T., U.E.Raxmatov "Genetika va evolyutsion ta'limot (Genetika I-qism)". "Tafakkur" nashriyoti. Toshkent - 2021. 5. Fayzullaev S.S. G'ofurov A.T. "Odam genetikasi" Barkamol fayz media nashriyoti. Toshkent-2018 y. 6. U.E.Raxmatov, A.T.G'ofurov, S.S.Fayzullaev, "Genetikadan masala va mashqlar" O'quv qo'llanma. Toshkent –2022 y. 7. Рахматов У.Э., Шахмурова Г.А., Азимов И.Т. «Решение заданий и задач по биологии» Учебное пособие. "Lesson press" издательство Ташкент – 2022 г. 8. Tara Rodden Rjbinson Fssistant Professor (Reseach), Oregon State University "Genetics for Dummies" Coyright 2005 by Wiley Publishing, Inc., Indianapolis, Indiana.
Scope of assessment criteria and procedure	<p>CURRENT CONTROL</p> <p>Purpose: Determining and assessing the master's level of knowledge, practical skills, and competencies on course topics.</p> <p>Instructions: The master's activity in daily classes is assessed through the master's mastery of course topics, as well as constructively interpreting and</p>

analyzing the educational material, developing module-specific skills, acquiring practical skills (in terms of quality and the specified number) and competencies, solving problem situations aimed at applying professional practical skills, working in a team, preparing presentations, etc.

Current control form:

Activity in lessons
Preparing educational materials
Working with sources within the subject
Using educational technologies
Working in a team
Preparing presentations
Working with projects

INTERMEDIATE CONTROL

Purpose: Assessing the master's knowledge and practical skills and level of mastery of lecture material after completing the relevant section of the course.

Form and procedure of intermediate control: Midterm examination is held during the semester during the training sessions after the completion of the relevant module of the curriculum of the subject. Midterm examination is held once in written form within the framework of this subject. Midterm examination questions cover all topics of the subject.

Independent learning:

Purpose: Independent learning is aimed at fully covering the content of this course, expanding the theoretical knowledge acquired, and establishing independent learning activities for masters.

Form and procedure of independent education: Independent work assignments are completed in the form of an educational project, presentation, case study, problem solving, information search, digest, colloquium, essay, article, abstract, etc.

Completed assignments for independent study are placed in the electronic system and checked based on the anti-plagiarism program and evaluated by the subject teacher.

In this case, the uniqueness of the completed assignment should not be less than 60%, otherwise the assignment will not be accepted for assessment.

The number of independent work assignments, depending on the nature of the subject, should not be less than 3 for one subject (module).

Independent work assignments account for 60% of the points allocated for current and intermediate control.

Independent learning task 1: Preparation of project work based on independent learning topics

Independent learning task 2: Preparing sample video lessons based on specialized subject topics.

Independent learning task 3: Preparation of open lesson plans in specialized subjects using interactive methods.

Independent learning task 4: Analysis of educational normative documents for specialized subjects and preparation of presentations.

FINAL CONTROL

Purpose: The final examination is held at the end of the semester to determine the level of mastery of the master's theoretical knowledge and practical skills in the relevant subject. The final examination is held at a specified time according to the examination schedule created by the Registrar's Office on the electronic platform.

Requirements: The master must have passed the current control, intermediate control and independent learning assignments by the deadline for the

	<p>final control type in the relevant subject.</p> <p>A master who has not passed the current control, intermediate control and independent learning assignments, as well as who has received a score in the range of "0-29.9" for these assignments and control types, is not included in the final control type.</p> <p>Also, a master who has missed 25 percent or more of the classroom hours allocated to a subject without a reason is excluded from this subject and is not included in the final control type and is considered not to have mastered the relevant credits in this subject.</p> <p>A master who has not passed or was not included in the final control type and has received a score in the range of "0-29.9" for this type of control is considered to be an academic debtor.</p> <p>Final control form: The final examination in this subject will be conducted in written form.</p> <p>If the final examination is conducted in written form, the requirements for assessment must also be reflected.</p>					
Criteria for assessing master knowledge	5 stars	100 points		Evaluation criteria		
	5	90-100	Excellent	When a master is considered to be able to make independent conclusions and decisions, think creatively, observe independently, apply the knowledge he has gained in practice, understand, 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 master is considered to be able to observe independently, apply the knowledge he has gained in practice, understand, know, express, and narrate the essence of the subject (subject), and has an idea about the subject (subject)		
	3	60-69,9	Satisfactory	When the master is found to be able to 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)		
	2	0-59,9	Unsatisfactory	When it is determined that the master has not mastered the science program, does not understand the essence of the science (subject), and does not have an idea about the science (subject)		
Course evaluation criteria and procedure	Control type		Total points allocated	Control (task) form	Distribution of points	Qualifying score
	Current control		30 points	System tasks	20 points (divided by the number of tasks)	18 points

			Master activity (in seminars, practical, laboratory classes)	10 points	
	Intermediate control	20 points	Supervision: Written work	10 points	12 points
			System tasks	10 points (divided by the number of tasks)	
	Final inspection	50 points	Written assignment (5 questions)	50 points (10 points per question)	30 points
	<p><i>* Note: 60% of the points allocated for current and intermediate control are allocated to independent work assignments. Independent work assignments are evaluated as system assignments through the electronic platform.</i></p>				