Discipline designation	Methodology of Scientific Research
Semester(s) in which the discipline is taught	1
Teacher in charge	Azimova Dilnoz Ergashevna, Doctor of Philosophy (PhD) in Biological Sciences, Associate Professor
Teaching language	Uzbek
Connection to the curriculum	Mandatory
Academic рўгкқ (including contact hours, SsIW)	Total hours: 150 hours Contact hours – Lecture 30 hours Seminar 30 hours SsIW 90 hours
ECTS	5
Prerequisites	Pedagogy, History, Philosophy
Discipline aims. Learning outcomes	**Goals and objectives** **The purpose of the discipline** is to teach masters the general principles of scientific research, the methodology of scientific knowledge, the essence of science and scientific knowledge in the context of globalization and integration. **Learning outcomes:** - quote the works of Western and Eastern scientists and thinkers - determine the essence of science and the problems of periodization of the history of science; distinguish between the scientific worldview, the goals and objectives of scientific research, their essence – develop skills in using the categorical apparatus of scientific methodology – monitor a critical and reflective attitude towards the surrounding reality – be able to classify the system of values that determine the social responsibility of scientists - work with educational and scientific texts of different levels of complexity that meet the tasks of professional activity - be able to classify sources of information related to scientific research when writing a master's thesis -interpret the results of scientific research to explain observed processes; - be able to scientifically substantiate the feasibility and practicality of research work - plan and predict the results of research work - compare modern methods: dialectics, synergetics, empirical and theoretical scientific methods;
Lesson contents	1. Aims and objectives of the subject “Methodology of scientific research”. Methodological foundations of scientific knowledge. 2. Choice of direction of scientific research and scientific problem. Organization of the research process 3. Master's thesis as a type of research. The procedure for writing a scientific article and procedural and methodological research schemes. 4. The role of creativity in pedagogical research. The importance of creative thinking in scientific research. 5. Means and methods of scientific research. Historical and logical in scientific research. 6. Synergetics and scientific research. Modern methods of scientific knowledge. 7. Forecasting scientific research. Scientific foresight and its role in scientific

	research. 8. Information and information security in scientific research. Basic methods of information search. 9. Rational and irrational in scientific research. The role of intuition in the process of scientific research. 10. The importance of understanding and explanation in scientific research. 11. The role of scientific facts in pedagogical research. 12. Novelties and innovations are an integral part of modern scientific research. 13. Experimental research. Methods used at the empirical and theoretical level. 14. Conducting scientific research, recording its results and implementing them into life. (using the example of a master's thesis) 15. Social responsibility of a scientist in scientific research.
Examination type	Tests (master's degree): 50 tests are loaded into the computer database, duration – 50 minutes.
Training and examination requirements	Requirements for successful mastery of the discipline Complete mastery of theoretical and methodological concepts in the subject, the ability to correctly reflect the results of knowledge, independently reason about the processes being studied and carry out tasks in daily, mid-term, and pass the final control in test form. When creating FA test questions, deviations from the content of the scientific program are not allowed. The FA test bank for each subject is discussed at the meeting and approved by the head of the department. When compiling FA tests, a bank of FA test tasks is used, the number of tests in control is in a 50/50 ratio, depending on classroom and independent learning. No later than 1 week before the start of the meeting, tests signed by the head of the department are submitted to the dean's office and entered into the computer in advance of the exam.
Reference	1. Туленова К., Илмий тадкикот методологияси. Учебное пособие. Т.,2022 2. Шермухаммедова Н.А.,Давронов З.Д. Методология научного исследования. Учебник. Т.,2014 3. Саифназаров И., Мухтаров А., Султонов Т.,Илмий тадкикот методологияси. Т. 2019. 4. Валиева С., Туленова К.,Туленова Ж.Илмий тадкикот методологияси . Укув кулланма. Т., 2020. 5. Железняк В.К.,Бариев А.В.,Рябенко Д.С. Методология научного исследования. Пособие для магистрантов и аспирантов технических специальностей. Новополоцк. 2018-88с. 6. Пустынникова Е.В. Методология научного исследования. Учебное пособие. Ульяновск. 2017-130с. 7. Минеев В.В. Методология и методы научного исследования. Учебное пособие для студентов магистрантов. Красноярск- 2014.-90с. 8. Герасимов И.А.. Философия и методология науки. Философские проблемы науки и техники. Учебное пособие. М. 2014 -73с. 9. Тулаев Б. Методология научного исследования. Учебник. 2020-199с.
Scope of assessment criteria and procedure	**CURRENT CONTROL** **Purpose:** Determining and assessing the master's level of knowledge, practical skills, and competencies on course topics.

	Instructions: The master's activity in daily classes is assessed through the master's mastery of course topics, as well as constructively interpreting and 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:** ndependent 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 final control type in the relevant subject.

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.

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.

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.

Final control form: The final examination in this subject will be conducted in written form.

If the final examination is conducted in written form, the requirements for assessment must also be reflected.

Criteria for assessing master knowledge

5 stars	**100 points**		**Evaluation criteria**
5	90-100	Excel lent	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	Satisfa ctory	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	Unsatis factory	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
	** **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.*				