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Уникальный программный FEDERAL STATE AUTONO MOUS EDUCATIONAL INSTITUTION OF HIGHER **EDUCATION** 

> "MOSCOW POLYTECHNIC UNIVERSITY" (MOSCOW POLYTECHNIC UNIVERSITY)

Faculty of Economics and Management

Dean, Faculty of Economics and Management /A.V. Nazarenko/

# OPERATIONAL PROGRAM OF THE DISCIPLINE

Methodology and Methods of Scientific Research in Professional Activity

Direction of training/specialty

42.04.01 Advertising and public relations Profile/specialization **Innovative Marketing in Advertising** 

> Qualification master

Forms of study part-time

Moscow, 2022

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#### 1. Goals, objectives and planned results of training in the discipline

The purpose of mastering the discipline "Methodology and methods of scientific research in professional activity" is to study the main issues of the theory of statistics, macroeconomic and microeconomic statistics, the formation of skills for statistical calculations and the use of statistical analysis methods to train an economist who meets the requirements of professional standards and the Federal State Educational Standard in the direction 42.04.01 Advertising and public relations ".

The main tasks of studying the discipline:

mastering the most important concepts and provisions of the general theory of statistics in the field of collecting primary statistical information, summarizing and grouping the obtained primary data and their subsequent processing by statistical analysis methods;

mastering the methodology of collecting, processing and statistical analysis of data necessary to solve the economic tasks;

getting an idea of the areas of application and the formation of skills for using the studied techniques in the practical activities of an employee of the financial service of the organization.

 $\Box$  study of the most important indicators of social statistics and the methodology of their calculation.

Training in the discipline "Methodology and methods of scientific research in professional

activity" is aimed at the formation of the following competencies among students:

Code and name of competencies	Indicators of competence achievement		
UC-1. Capable able to carry out a critical analysis of problem situations based on a systematic approach, to develop a strategy of actions	IUC-1.1. Analyzes the problem situation as a system, performs its decomposition and determines the connections between its components.  IUC-1.2. Identifies inconsistencies and gaps in the information needed to solve a problem situation, and also critically evaluates the relevance of the information sources used.  IUC-1.3. Develops and substantiates a strategy for solving a problem situation on the basis of a systematic and interdisciplinary approach, taking into account the assessment of existing		
	risks and the possibilities of minimizing them.		

#### 2. The place of discipline in the structure of the educational program

The discipline belongs to the mandatory part of block B1 "Disciplines (modules)". The study of the discipline is based on the following disciplines, practical training:

no

The main provisions of the discipline should be used in the future when studying the following disciplines (practices):

- Finance, money circulation and credit;
- Industry economics;
- ☐ Risk assessment and analysis;
- Marketing research;
- ☐ Economic analysis
- ☐ Pre-graduate practice.

#### 3 Structure and content of the discipline

The total labor intensity of the discipline is 4 credits (216 hours).

- 3.1 Types of educational work and labor intensity
- 3.1.1. part-time education

p/p	Type of educational work	Number of	Seme	esters
		hours	1	-
1.	Classroom classes	28	28	-
	including:			
1.1	Lectures	14	14	-
1.2	Seminars/practical classes	14	14	-
1.3	Laboratory classes	-	-	-
2.	Independent work	188	188	-
	including:			
2.1	Preparation for practical classes (study of	98	98	-
	lecture material)			
2.2	Preparing for testing	45	45	-
2.3	Independent task solving	45	45	-
	Intermediate certification			
	test/ dif. test/ exam		Экзамен	-
	Total	216	216	-

# 3.2 Thematic plan for the study of the discipline (according to the forms of training) 3.2.1. part-time education

p/p	3.2.1. part-time education	Labor intensity, hour					
			Classroom work		·k		
		Total	Lectures	practical classes	Laboratory classes	Practical training	Independent work
1.	Science and scientific research	24	2	2	-	-	10
2.	The concept of the method and methodology of scientific research	24	2	2	-	-	10
3.	Philosophical and general scientific methods of scientific research	24	2	2	-	-	10
4.	Private and special methods of scientific and pedagogical research	24	2	2	-	-	10
5.	Correlation of pedagogical science and pedagogical practice Experimental method in scientific and pedagogical research Survey method: interview Methodology of pedagogical research of personality	24	2	2	-	-	10
6.	Preparatory stage of research work Organization of the research process Structure of the Master's thesis	24	1	1	-	-	10
7.	The style of the scientific and pedagogical text Identification of problematic situations in the text	24	1	1	-	-	10

	Techniques of semantic text folding						
Annotation and abstracting of scientific texts							
	Scientific review						
<ul><li>8. Preparation of a master's thesis</li><li>9. Features of preparation and defense of a</li></ul>		24	1	1	-	-	10
		24	1	1	-	-	8
	master's thesis						
	Итого	216	14	14	-	-	188

#### 3.3 Content of the discipline

#### Topic 1. Science and scientific research

Methodology of science: definition, tasks, levels and functions. Methodological principles of scientific research. Methodologism and anti-methodologism. General scientific, private and specific methodology. The main methodological approaches (systemic, synergetic, anthropological, axiological, cultural and activity).

#### Topic 2. The concept of the method and methodology of scientific research

Theory as a form of knowledge. Functions of the theory (systematization, explanation, description). The structure of the theory. Criteria for the truth of the theory. Types of theories. Principles of theory construction (the principle of simplicity, familiarity, universality, beauty). The method of scientific knowledge: essence, content, main characteristics. The concept of "methodology". Selection, modification and development of the methodology. The problem of the relationship of theory, method and methodology.

#### Topic 3. Philosophical and general scientific methods of scientific research

Science as a special kind of cognitive activity. The concept of "paradigm". Paradigm and the scientific community. The role of the paradigm in scientific cognition. The structure of the paradigm (principles, laws, models). The essence and content of the classical paradigm of science. Specific features of the postclassical paradigm of science.

#### Topic 4. Private and special methods of scientific and pedagogical research

The categorical structure of scientific thinking. Absolute categories as properties of objects. The system of absolute categories.

Comparative categories as relations between objects. The system of comparative categories. The relationship between absolute and comparative categories. The language of science as a system of concepts, signs, symbols. The specifics of the language of science (accuracy, clarity, clarity). The main categories and concepts of psychology and pedagogy. Their relationship and difference. Methodology of scientific research. Methods of scientific research

# Topic 5. Correlation of pedagogical science and pedagogical practice. Experimental method in scientific and pedagogical research. Survey method: interview. Methodology of pedagogical research of personality

Classification of research methods. Research and diagnostics of the concept of "subject". Method as a method of research. Principles of the choice of research methods. The concept of "classification". Types of classification of research methods Classification of research methods into theoretical and empirical. Classification of research methods into general, general scientific and methods of specific sciences. General methods (analysis and synthesis, comparison, generalization, classification, etc.). General scientific methods (observation, modeling, experiment, inductive method, hypotheticaldeductive, measurement, etc.). Methods of concrete sciences. Research capabilities of various methods. The essence of the study. The specifics of research in psychology. Types of research. The program of scientific research. Methodological apparatus of scientific research. The relevance of the topic. A contradiction. Formulation of the research problem. An object. Subject. The purpose and objectives of the hypothesis development. The choice of methods. Stages of the study. The structure of pedagogical research, the variability of its construction. The essence of diagnostics. Requirements for psychological and pedagogical diagnostic methods. Test method. Psychological and pedagogical tests. Types of tests. Functional tests. Technology of creation and adaptation of test methods. Requirements for the testing procedure. The use of psychological and pedagogical diagnostic techniques in pedagogical research.

# Topic 6. Preparatory stage of research work. Organization of the research process. Structure of the Master's thesis.

Ways to represent data Tabular representation of data. Statistical and sociological tables. Types of tables (linear, group, combination). Rules for constructing tables. The main elements of the table. The technique of creating and editing tables. Graphical representation of data. Histogram. Chart.

# Topic 7. The style of the scientific and pedagogical text. Identification of problematic situations in the text. Techniques of semantic text folding. Annotation and abstracting of scientific texts. Scientific review

The role of statistical methods. General characteristics of statistical data processing methods. Correlation analysis. Factor analysis. Taxonomic procedures. Analysis of variance. Latent-structural analysis. Determination analysis.

# Topic 8. Preparation of a master's thesis

Procedure and technology of using various methods of scientific and pedagogical research (independent work) Survey and its types Survey as a method of obtaining sociological and psychological and pedagogical information. The specifics of the survey methods. Types of survey research methods (conversation, interview, questionnaire). Methodology and technology of interviews. Marketing research. Expert survey. Survey technology. Observation is the essence of observation. Requirements for scientific observation Types of observation. Observation and experiment: similarities and differences. Observation conditions. Measures to improve the accuracy and reliability of surveillance. Registration of observation data. Advantages and disadvantages of observation. Ensuring the objectivity of observation data. The role of the observer's presence. Introspection as a special kind of observation. The role of introspection in research. Experiment and its types The essence of the experiment. Methodology and methodology of the experiment. An experimental fact. Types of psychological and pedagogical experiment: laboratory, natural, ascertaining, forming. The experimentation procedure and its requirements. For

the formation of groups in the experiment. Ensuring the reliability of the results, forms of experimental control. Experimental errors. Reliable conclusions and artifacts of experimental research. The influence of the experimenter's personality on the results of the study. Projective methods The concept of "projective methods". Justification of the use of projective methods. Types of projective methods. A test for completing sentences. The caricature method. The method of interpretation of paintings. The method of didactic stories. The method of pseudo-actual questions. Game methods. Limitations of the use of projective methods. The method of analyzing the results in the activity. Processing, analysis and interpretation of research results Data processing. Quantitative and qualitative processing of research results. Data analysis. Types of data analysis. One-dimensional analysis. Analysis of the relationship between two variables. A method for clarifying the analysis of the relationship between variables. Correlation, partial correlation, regression. Multiple regression. Interpretation of the received data. Types of interpretations.

#### Topic 9. Features of preparation and defense of a master's thesis

Technology of opening an experimental site on the basis of a general education institution. Regulations on the experimental site. Registration of an application for the assignment of the status of an experimental site. Agreement on the creation of an experimental site. Passport of the experimental site. Certificate of assignment of the status of an experimental site. Conducting an audit (self-audit) of the experimental site. Development of the experiment Program. Research topic. Directions of work under the program. Relevance and novelty of the problem. Contradictions and problems. Object, subject, purpose, objectives, hypothesis, research concept, research methods. Thematic calendar plan. Monitoring of the process of experimental work. Scientific significance. Practical significance. The stages of the experiment (goal, objectives, content, planned result). Expected results from the implementation of the Program. Experimental work plan. Experiment resources. The methodology of the experiment. Reporting. Types of reports. The main requirements for the design of the results of scientific work. Forms of scientific reports. Scientific report. Technologies for the implementation of research results in practice. Forms of presentation of the results of the experiment. Development of a report for a scientific and practical conference, preparation for publication of scientific articles, educational and methodological materials.

### 3.4. Topics of seminars/practical and laboratory classes

#### 3.4.1 Seminars/practical classes

Topic 1. Science and scientific research

The main methodological approaches (systemic, synergetic, anthropological, axiological, cultural and activity).

Topic 2. The concept of the method and methodology of scientific research

Types of theories. Principles of theory construction (the principle of simplicity, familiarity, universality, beauty). The method of scientific knowledge: essence, content, main characteristics. The concept of "methodology".

Topic 3. Philosophical and general scientific methods of scientific research

The role of the paradigm in scientific cognition. The structure of the paradigm (principles, laws, models). The essence and content of the classical paradigm of science. Specific features of the postclassical paradigm of science.

#### Topic 4. Private and special methods of scientific and pedagogical research

The language of science as a system of concepts, signs, symbols. The specifics of the language of science (accuracy, clarity, clarity). The main categories and concepts of psychology and pedagogy. Their relationship and difference. Methodology of scientific research. Methods of scientific research

Topic 5. Correlation of pedagogical science and pedagogical practice. Experimental method in scientific and pedagogical research. Survey method: interview. Methodology of pedagogical research of personality

Formulation of the research problem. An object. Subject. The purpose and objectives of the hypothesis development. The choice of methods. Stages of the study. The structure of pedagogical research, the variability of its construction. The essence of diagnostics. Requirements for psychological and pedagogical diagnostic methods. Test method. Psychological and pedagogical tests. Types of tests. Functional tests. Technology of creation and adaptation of test methods. Requirements for the testing procedure. The use of psychological and pedagogical diagnostic techniques in pedagogical research.

Topic 6. Preparatory stage of research work. Organization of the research process. Structure of the Master's thesis.

Statistical and sociological tables. Types of tables (linear, group, combination). Rules for constructing tables. The main elements of the table. The technique of creating and editing tables. Graphical representation of data. Histogram. Chart.

Topic 7. The style of the scientific and pedagogical text. Identification of problematic situations in the text. Techniques of semantic text folding. Annotation and abstracting of scientific texts. Scientific review

General characteristics of statistical data processing methods. Correlation analysis. Factor analysis. Taxonomic procedures. Analysis of variance. Latent-structural analysis. Determination analysis.

### Topic 8. Preparation of a master's thesis

Processing, analysis and interpretation of research results Data processing. Quantitative and qualitative processing of research results. Data analysis. Types of data analysis. One-dimensional analysis of the relationship between two variables. A method for clarifying the analysis of the relationship between variables.

Topic 9. Features of preparation and defense of a master's thesis

The methodology of the experiment. Reporting. Types of reports. The main requirements for the design of the results of scientific work. Forms of scientific reports. Scientific report. Technologies for the implementation of research results in practice. Forms of presentation of the results of the experiment.

#### 3.4.2. Laboratory classes

Laboratory classes in the discipline are not provided for in the curriculum.

#### 3.5. Topics of course projects (term papers)

The course project (term paper) on the discipline is not provided for in the curriculum.

#### 4 Educational, methodological and informational support

#### 4.1 Regulatory documents and GOST standards

Normative documents and GOST standards are not used in the study of the discipline.

#### 4.2 Basic literature

Main literature 1. Emikh N.A.Cultural paradigm of modern education: Philosophical and anthropological foundations [Electronic resource] / Emikh N.A. - M.: Logos, 2020. -

- 2. Babynina T.F. Methodology and methodology of psychological and pedagogical research [Electronic resource]: seminar and laboratory classes on the course. Textbook for students of the Faculty of preschool education / Babynina T.F.— Electron. text data.— Naberezhnye Chelny: Naberezhnye Chelny Institute of Socio-Pedagogical Technologies and Resources, 2019.— 100 p.— Access mode: http://www.iprbookshop.ru/29881.
- 3. Algazina N.V. Preparation and defense of the final qualifying work of the master (master's thesis) [Electronic resource]: educational and methodological manual/ Algazina N.V., Prudovskaya O.Yu.- Electron. text data.— Omsk: Omsk State Institute of Service, 2022.— 103 p.— Access mode: http://www.iprbookshop.ru/32790.
- 4. Pedagogical theories and systems: studies. The manual/ author-compiled by E.N.Seliverstova, L.I. Bogomolova, E.Y. Rogacheva; under the general editorship of E.N. Seliverstova, Vladimir: VlSU, 2021. (VlSU Library)

#### 4.3 Additional literature

Fundamentals of scientific work and methodology of dissertation research [Electronic resource]: monograph/ G.I. Andrev [et al.].— Electron. text data.— M.: Finance and Statistics, 2012.— 296 p.— Access mode: http://www.iprbookshop.ru/12439

Galaktionova L.V. Educational and methodological foundations of the preparation of the final qualifying work [Electronic resource]: textbook for students/ Galaktionova L.V., Rusanov A.M., Vasilchenko A.V.— Electron. text data.— Orenburg: Orenburg State University, EBS DIA, 2014.— 98 p.— Access mode: http://www.iprbookshop.ru/33662.

#### 4.4 Electronic educational resources

1. Electronic educational resources in this discipline are in the process of development.

#### 4.5 Licensed and freely distributed software

1. Microsoft Office suite programs (Word, Excel, PowerPoint)

#### 4.6 Modern professional databases and information reference systems

1. SPS "ConsultantPlus: Non-commercial Internet version". - URL: http://www.consultant.ru/online / (accessed: 02/16/2023). - Access mode: free.

#### 5 Material and technical support

- 1. Lecture hall.
- 2. An audience for practical classes.
- 3. Computer class with Internet access.
- 4. An audience for group and individual consultations, ongoing monitoring and interim certification.
  - 5. An audience for independent work.
  - 6. Library, reading room.

#### 6 Methodological recommendations

# 6.1 Methodological recommendations for the teacher on the organization of training

Methodological recommendations for the teacher on the organization of training

This section of this work program is intended for novice teachers and practitioners who do not have teaching experience.

The discipline Methodology and methods of scientific research in professional activity forms the competence of the students of the CC-1. In the conditions of designing educational systems based on the principles of the competence approach, there has been a conceptual change in the role of the teacher, who, along with the traditional role of the knowledge carrier, performs the function of the organizer of the student's research work, consultant in the procedures for selecting, processing and interpreting information necessary for practical action and further development, which must necessarily be taken into account when conducting lectures and practical classes in the discipline "Methodology and methods of scientific research in professional activity"

The teaching of theoretical (lecture) material on the discipline "Methodology and methods of scientific research in professional activity " is carried out on the basis of interdisciplinary integration and clear interdisciplinary connections within the framework of the educational program and curriculum.

The detailed content of individual topics of the discipline "Methodology and methods of scientific research in professional activity " is considered in paragraph 3.3 of the work program.

Approximate variants of tasks and test tasks for the current control and a list of questions for the exam in the discipline are presented as part of the FOS for the discipline in paragraph 7 of this work program.

The list of basic and additional literature, databases and information reference systems required in the course of teaching the discipline "Methodology and methods of scientific research in professional activity " is given in paragraph 4 of this work program.

#### 6.2 Methodological guidelines for students on the development of the discipline

Obtaining in-depth knowledge of the discipline is achieved through the active independent work of students. It is advisable to use the allocated hours to get acquainted with the educational and scientific literature on the problems of the discipline, the analysis of scientific concepts.

Within the framework of the discipline, various forms of monitoring the level of achievement by students of the declared indicators of competence development are provided.

Forms of current control – the activity of work in practical classes, testing.

The form of intermediate control in the discipline is an exam, during which the level of achievement of the declared indicators of competence development by students is assessed.

Methodological guidelines for the development of the discipline.

<u>Lectures</u> are conducted in accordance with the content of this work program and are a presentation of the theoretical foundations of the discipline.

Attending lectures is mandatory.

Taking notes of the lecture material is allowed both in writing and by computer.

Regular repetition of lecture notes for each section in preparation for the current forms of certification in the discipline is one of the most important types of independent work of the student during the semester, necessary for high-quality preparation for intermediate certification in the discipline.

<u>Conducting practical</u> classes in the discipline "Methodology and methods of scientific research in professional activity" is carried out in the following forms:

- a survey based on materials reviewed at lectures and studied independently according to the recommended literature;
- analysis and discussion of issues on topics, problem solving.

Attendance of practical classes and active participation in them is mandatory.

<u>Preparation for practical</u> classes necessarily includes the study of lecture notes and recommended literature for an adequate understanding of the conditions and method of performing tasks planned by the teacher for a specific practical lesson.

Methodological guidelines for performing various forms of extracurricular independent work. The study of the main and additional literature on the discipline is carried out on a regular basis in the context of each topic to prepare for the intermediate certification in the discipline "Methodology and methods of scientific research in professional activity". The list of the main and additional literature on the discipline is given in paragraph 4 of this work program.

Methodological guidelines for preparation for intermediate certification

Intermediate certification in the discipline "Methodology and methods of scientific research in professional activity" takes place in the form of an exam. An approximate list of questions for the exam in the discipline "Methodology and methods of scientific research in professional activity" and the criteria for evaluating the student's response for the purpose of evaluating the achievement of the stated indicators of competence formation are given as part of the FOS for the discipline in paragraph 7 of this work program.

The student is allowed to intermediate certification in the discipline, regardless of the results of the current progress control.

#### **7 Evaluation Funds Fund**

7.1 Methods of monitoring and evaluating learning outcomes

	0 0	
Code and name of	Indicators of competence achievement	Code and name of
competencies		competencies
UC-1. Capable able to carry	IUC-1.1. Analyzes the problem situation	UC-1. Capable able to
out a critical analysis of	as a system, performs its decomposition	carry out a critical
problem situations based on	and determines the connections between	analysis of problem
a systematic approach, to	its components.	situations based on a
develop a strategy of actions		systematic approach,
		to develop a strategy
<u> </u>		of actions

### 7.2 Шкала и критерии оценивания результатов обучения

#### 7.2.1. Criteria for evaluating the answer to the exam

(formation of competence of the UC-1, indicators of the IUC-1.1, IUC-1.2)

- "5" (excellent): the student demonstrates excellent theoretical knowledge, practical skills, knows the terms, makes reasoned conclusions and generalizations, gives examples, shows fluency in monologue speech and the ability to quickly respond to clarifying questions.
- "4" (good): the student demonstrates good theoretical knowledge, practical skills, knows the terms, makes reasoned conclusions and generalizations, gives examples, shows fluency in monologue speech, but at the same time makes insignificant mistakes that he quickly corrects independently or with minor correction by the teacher.
- "3" (satisfactory): the student demonstrates satisfactory theoretical knowledge, shows poorly formed skills in analyzing phenomena and processes, insufficient ability to draw reasoned conclusions and give examples, shows insufficient fluency in monologue speech, terms, logic and consistency of presentation, makes mistakes that can be corrected only when corrected by a teacher.
- "2" (unsatisfactory): the student demonstrates ignorance of the theoretical foundations of the subject, lack of practical skills, does not know how to draw reasoned conclusions and give examples, shows poor command of monologue speech, does not know the terms, shows a lack of logic and consistency of presentation, makes mistakes that cannot be corrected when corrected by the teacher, refuses to answer additional questions.

#### 7.2.2. Criteria for evaluating the student's work in practical classes

(formation of competence of the UC-1, indicators of the IUC-1.1, IUC-1.2)

- "5" (excellent): all the tasks provided for in the practical training plan were completed, the student answered all control questions clearly and without errors, actively worked in practical classes.
- "4" (good): all the tasks provided for in the practical training plan were completed, the student answered all the control questions with the teacher's corrective remarks, worked quite actively in practical classes.
- "3" (satisfactory): all tasks provided for in the practical training plan were completed with the teacher's comments; the student answered all control questions with comments.
- "2" (unsatisfactory): the student did not complete or incorrectly completed the practical tasks provided for in the practical training plan; the student answered the control questions with errors or did not answer the control questions.

#### 7.2.3. Criteria for evaluating test results

(formation of competence of the UC-1, indicators of the IUC-1.1, IUC-1.2)

The test is evaluated according to the percentage of correct answers given by the student to the test questions.

The standard scale of compliance of test results with the assigned score:

- □ "excellent" over 85% of correct answers;
- □ "good" from 70.1% to 85% correct answers;
- □ "satisfactory" from 55.1% to 70% of correct answers;

from 0 to 55% of correct answers – "unsatisfactory"

- "5" (excellent): the test taker demonstrates excellent theoretical knowledge, knows the terms and has the ability to quickly respond to test questions.
- "4" (good): the test taker demonstrates good theoretical knowledge, knows most of the terms and has the ability to respond quickly to test questions.
- "3" (satisfactory): the test taker demonstrates satisfactory theoretical knowledge, owns the basic terms and concepts.
- "2" (unsatisfactory): the test taker has no theoretical knowledge, he does not know the terminology and reacts slowly to the test questions.

#### 7.3 Evaluation tools

#### 7.3.1. Current control

(formation of competence of the UC-1, indicators of the IUC-1.1, IUC-1.2)

#### **Examples of tasks to solve in practical classes:**

#### Tasks for mandatory execution:

1. Formulate the problem of future scientific research

2.

Write an abstract for the abstract of the candidate's dissertation; reveal the essence, ways of solving the problem considered in the abstract.

- 3. Determine what can be the subject of pedagogical research if the object of research is: 
  pedagogical communication, 
  cognitive activity of younger schoolchildren, 
  educational and 
  research activities of adolescents.
- 4. Formulate the topic of pedagogical research based on the proposed goal: · to determine the pedagogical conditions that contribute to the formation of legal awareness of adolescents; · to reveal the scientific, theoretical, technological foundations for the formation of research experience in extracurricular activities among adolescents.
- 5. Determine the purpose of the pedagogical research, the topic of which is as follows: "Development of business communication skills among high school students"; · "Formation of ethno-cultural competence among students of the national school".
- 6. Formulate the topic, purpose, if the object and subject of pedagogical research are known:

Subject: _		
Purpose:		

Object: teacher's communicative competence. Subject: pedagogical conditions for the development of communicative competence among students of a pedagogical college.

7. Determine which aspects of pedagogical research (base, object, subject) we are talking about: - extracurricular educational and research activities of older teenage schoolchildren; - the

process of formation of subjective research experience among older adolescents in extracurricular educational and research activities; - a team of teachers and students of school No. 25.

8. Select one topic from the proposed list and develop a methodological apparatus for its research: The organization of educational and research activities of adolescents in history lessons. Didactic game as a means of developing cognitive abilities of teenagers in history lessons. Aesthetic education of students in music lessons. The influence of music on the emotional sphere of a student's personality. (The topic can be selected independently).

Working with scientific information.

- 1. Make a list of literature on the research problem.
- 2. Prepare a review of journal publications over the past year on the issue of your research.
- 3. Make various kinds of records of the information found on the research problem.

#### **Examples of test tasks:**

- Task 1. Prepare a report on the topic: "Research work as a component of pedagogical activity".
- Task 2. Identify the problems of modern psychological and pedagogical research based on viewing the magazines "Pedagogy", "Education at school", "Public Education", "School technologies", "Music at school".
- Task 3: Make a list of pedagogical journals published in our country. The articles published in these journals reflect the results of various pedagogical studies. Give examples based on the analysis of titles, texts of articles, examples of theoretical and experimental research; examples of fundamental, applied pedagogical research, research and development.
  - Task 4: Build a scheme "Pedagogical scientific knowledge", "Pedagogical research".
- Task 5: Read, analyze, take notes of an article from a pedagogical journal ("Pedagogy", "Public education", "Education of schoolchildren", "School technologies", etc.). Make theses, an abstract of the article.
- Task 6: Make a program for monitoring the manifestation of cognitive activity of adolescents in the classroom. Prepare a report on the results of the observation. Complete the report on the results of the study.
- Task 7: Prepare a questionnaire to identify significant values in the lives of teenagers (high school students, students). Conduct a survey. Analyze the results of the survey.
- Task 8: Select a set of tests that allow you to determine emotional well-being (the level of development of communication abilities, research skills)

schoolchildren. Conduct testing. Prepare an information report on the results of the testing.

- Task 9: Make a program and a plan for studying the experience of organizing a scientific society of students, a theater studio, a choral collective of one of the schools of the city.
  - Task 10: Prepare a project presentation on one of the proposed topics:
  - "How to defend a master's thesis in pedagogy";
- "How to write a scientific article based on the results of a completed pedagogical research":
  - "How to prepare for participation in a scientific conference";

- "How to write abstracts of the report".

#### Test 2

- 1. Finish sentence
- 1.1 Question, task, requiring resolution, research.arch.
- 1.2 Concise formulation of the research problem.
- 1.3 A process or phenomenon that generates a problematic situation.
- 1.4 A separate aspect of the object, the point of view from which the object is viewed -.
- 1.5 A scientific assumption put forward to explain any phenomena.
- 1.6 A way to solve the research problem.
- 1.7 Presentation of the results of the study.

#### 7.3.2. Interim certification

(formation of competence of the UC-1, indicators of the IUC-1.1, IUC-1.2)

#### **Exam questions**

- 1 Philosophical foundations of the methodology of scientific research.
- 2. The concept of the method and methodology of scientific research.
- 3. Theory, method and methodology, their interrelation.
- 4. Scientific conceptual apparatus.
- 5. Typology of scientific research methods.
- 6. The relationship of the subject and the method.
- 7. Scientific facts and their role in scientific research.
- 8. Research and diagnostics.
- 9. Methodology of pedagogy and its levels.
- 10. Requirements of reliability, validity and sensitivity of the applied techniques.
- 11. Methods of data presentation
- 12. Procedure and technology of using various methods of psychological and pedagogical research.
  - 13. Methods of statistical data processing
  - 14. General characteristics of pedagogical research methods
  - 15. Survey and its types
  - 16. Observation and its types
  - 17. Experiment and its types
  - 18. Projective methods
  - 19. Performance analysis method
  - 20. Processing, analysis and interpretation of research results
  - 21. Organization of experimental work in educational institutions.
  - 22. Study of advanced pedagogical experience.
  - 23. The logic of the scientific research process.
  - 24. Basic principles of psychological and pedagogical research.
  - 25. The concept of a scientific problem, its formulation and formulation.
  - 26. The content of the scientific hypothesis, its nomination and justification.
  - 27. Levels and methods of scientific research.
  - 28. The specifics of psychological and pedagogical research.
  - 29. Experiment as a research method.

- 30. Comparison and measurement. The problem of measurement in psychological and pedagogical research.
  - 31. Questioning in psychological and pedagogical research.
  - 32. The main types of tests.
  - 33. Methods of theoretical generalization of empirical information.
  - 34. The structure and main elements of psychological and pedagogical research.
  - 35. The program of psychological and pedagogical research.
  - 36. Methods of analysis and processing of research results.
  - 37. Registration of the results of the research work.