Національний технічний університет України
«КИЇВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ
імені ІГОРЯ СІКОРСЬКОГО»

Department of Psychology and Pedagogy

Methodology of Scientific Research

Work program of the discipline (Syllabus)

Details of the discipline

Level of higher education	*Third (educational and scientific)*
Field of knowledge	*05 Social and behavioral sciences*
Specialty	*053 Psychology*
Educational and scientific program	*Psychology*
Status of discipline	*Normative*
Form of study	*full-time / remote*
Course and semester	*2nd year, autumn (first) semester*
The scope of the discipline	*2 credits ECTS / 60 hours*
Semester control / control measures	*Exam*
Lessons schedule	*Lectures: Thursday 10.25-12.00 (1st week)* *Practical training: Thursday 10.25-12.00 (2nd week)*
Language of study	*Ukrainian*
Information about course leader / teachers	*Lecturer and practical: Head of the Department, Professor, Doctor of Psychological Sciences, Volianiuk Nataliia Yuriivna, +380505538334* *volianiuk.nataliia@lll.kpi.ua*
Course placement	

Curriculum of the discipline

1. Description of the discipline, its purpose, subject of study and learning outcomes

The subject of the discipline "Methodology of Scientific Research" is methodological basics of scientific research and practical activities in psychology. Research methodology is a branch of psychology that studies the systems of methods in psychological science, the creation of models of scientific activity and its individual types.

In accordance with the requirements of the educational and professional program, the purpose of the discipline is to form postgraduate students:

- ability to critically analyze, evaluate and synthesize new and complex ideas and socio-psychological phenomena;
- ability to develop a conceptual and categorical apparatus of their own research with psychology;
- ability to conduct theoretical and experimental research in psychology.

The educational basis of the discipline "Methodology of Scientific Research" is knowledge, obtained in the study of various courses aimed at disclosing theoretical, practical and methodological problems of psychological science, as well as the formation of skills and skills to critically analyze, evaluate and synthesize new and complex ideas and social psychological phenomena.

According to the requirements of the educational and scientific program, postgraduate students after mastering the curriculum disciplines must demonstrate the following learning outcomes:

knowledge:

• history of methodological research in psychology (ZN 16);
• the role and place of general psychological and specific psychological principles of organization and conducting psychological research (ZN 3);
• theoretical and empirical methods of psychological research (ZN 7);
• general methodological bases of scientific research (ZN 1);
• the contribution of the founders of world and domestic psychological schools in the disclosure of the subject and construction of research methods (ZN 11);
• technologies for developing a research project and implementing its results (ZN 15);
• basics of rational planning of research activities (ZN 2);
• conceptual and categorical apparatus of psychological research (ZN 9);
• features of the stage of preparation (orientation) in the research process (ZN 5);
• types of psychological research (ZN 8);
• basic standards of experimental activity in psychology (ZN 4);
• sources of formulation of scientific hypotheses (ZN 10);
• meaningful and formal planning of a psychological experiment (ZN 13);
• algorithm of experimental research (ZN 6).

skills:

• identify the methodological component of the phenomena of psychological knowledge (UM 1);
• specify general principles and leading conceptual provisions in accordance with requirements of a certain task, a certain situation (UM 7);
• determine the purpose and objectives of scientific research, taking into account the state of science and needs practices (UM 6);
• to develop appropriate methodological procedures for the study (UM 8);
• to analyze the literature on the issues of scientific research as a creation prerequisites for scientific research (UM 13);
• to structure theoretical and methodological knowledge, to have skills of its modeling (UM 4);
• evaluate the methodological validity of modern scientific research in psychology science (UM 5);
• choose a scientific field (UM 2);
• to formulate a hypothesis and tasks of scientific and practical psychological research (UM 14);
• choose adequate scientific and psychological research methods (UM 10);
• choose the type of research that is adequate to the specifics of professional tasks that are solved experimentally (UM 15).

As a result of mastering the discipline, postgraduate students will be able to:

• conduct research at the appropriate level (LC 1);
• critically and systematically evaluate the results of research work, determine prospects for further scientific research (UM-1);
• solve a wide range of problems and tasks in the field of social psychology on the basis of understanding of their nature, factors of influence, tendencies of development and with use theoretical and experimental methods (FC 4);
• innovatively rethink and apply methods of other fields of knowledge for implementation tasks of interdisciplinary psychological research (FC 8);
• independently perform research activities in the field of knowledge "Social and behavioral sciences" using modern theories, methods and information communication technologies (FC 15);
• adapt and summarize the results of modern psychological research to address scientific and practical problems (FC 16);

• conduct theoretical and experimental research, mathematical and computer modeling of mental phenomena (FC 17);

• search, process and analyze professionally important knowledge from various sources on the basis of modern methodologies of scientific activity with the use of information communication (digital) technologies (UM 5);

• perform scientific analysis of empirical material, interpret and structure it with taking into account the classical and latest methodological principles, formulate generalizations on the basis of independently processed data (UM 7);

• use psychodiagnostic tools to ensure innovation scientific activity (UM 8);

• choose the best research approaches and methods for the analysis of a particular socio-psychological phenomenon (UM 10);

• present the results of work in the form of completed research and development (scientific publications, reports, presentations, etc.) (UM16);

• extrapolate psychological knowledge to a wide range of research and innovation processes activities (UM 18).

Postgraduate students will also gain practical experience through the procedure experimental research. Communication with the teacher is possible and will be encouraged in the classroom as well within two hours of consultations with the teacher, which are held according to the schedule available on the site Department of Psychology and Pedagogy. In addition, for more effective communication in order to understand the structure of the discipline and the assimilation of the material uses e-mail volianiuk.nataliia@lll.kpi.ua, Telegram messengerhttps://t.me/joinchat/AAAAAE4Nglj_FPvDHrctm.

2. Requisites and post requisites of the discipline (place in the structural and logical scheme of education according to the relevant educational program)

The discipline is studied after mastering the disciplines "Philosophical principles of science activities", "Foreign language for scientific activities" and "Theoretical and methodological problems psychology", which are part of the cycle of mandatory (normative) disciplines of the educational program.

The study of the discipline will allow mastering such disciplines more effectively scientific level as: "Psychology of social phenomena", "Environmental Psychology", "Psychology of scientific and technical creativity". In addition, the study of the discipline "Methodology of scientific research" will allow passing successful pedagogical practice.

3. The content of the discipline

Full-time

List of Topics	Number of hours			
	Hours in total	Allocation of time by the type of class		
		Lectures	Seminars (Practical training)	Independent work
1	2	3	4	5
Section 1. Science and research in the modern world				
Topic 1.1. Science as a system of knowledge and the sphere of human activity	14	2	-	12
Topic 1.2. General methodological bases of scientific researches	12	-	-	12
Together under section 1	**26**	**2**	**-**	**24**
Section 2. Methodological bases of psychological researches				
Topic 2.1. General psychological and specific psychological principles of organization and conduct of psychological research	12	-	-	12
Topic 2.2. Theoretical methods of psychological research	**14**	-	2	12
Topic 2.3. Empirical methods of psychological research	**14**	-	2	12
Topic 2.4. Conceptual and categorical apparatus of the psychological research	**14**	2	-	12
Together under section 2	**54**	**2**	**4**	**48**
Section 3. Organization and conduct of research in psychology				
Topic 3.1. Types of psychological research and their stages carrying out	**14**	-	2	12
Topic 3.2. Requirements for the preparation and design of the dissertation research in the specialty 053 Psychology	**14**	2	-	12
Topic 3.3. Presentation and implementation of results psychological research	**12**	-	-	12
Together under section 3	**40**	**2**	**2**	**36**
Total amount of hours	**120**	**6**	**6**	**108**

4. Educational literature and resources

For the successful study of the discipline it is enough to study the educational material, which is taught in lectures, as well as to get acquainted with:

4.1 Basic literature:

1. Bocheliuk V. Y. Metodyka ta orhanizatsiia naukovykh doslidzhen iz psykholohii : Navchalnyi posibnyk [Elektronnyi resurs] / V. Y. Bocheliuk, V. V. Bocheliuk. – K. : Tsentr uchbovoi literatury,

2008. – 360 s. – Rezhym dostupu: https://docviewer.yandex.ua/?url=http%3A%2F%2Fpadabum.com%2Fx.php%3Fid%3D88773&name=x.php%3Fid%3D88773&lang=uk&c=5765b453eea2 [in Ukrainian].
2. Krushelnytska O. V. Metodolohiia ta orhanizatsiia naukovykh doslidzhen : navchalnyi posibnyk [Elektronnyi resurs] / O. V. Krushelnytska. – K. : Kondor, 2003. – 192 s. – Rezhym dostupu : http://www.twirpx.com/file/121707/ [in Ukrainian].
3. Osnovy metodolohii ta orhanizatsii naukovykh doslidzhen : Navch. posib. dlia studentiv, kursantiv, aspirantiv i adiuntiv [Elektronnyi resurs] / za red. A. Ye. Konverskoho. – K. : Tsentr uchbovoi literatury, 2010. – 352 s. – Rezhym dostupu: https://docviewer.yandex.ua/?url=http%3A%2F%2Fshron.chtyvo.org.ua%2FKonverskyi_Anatolii%2FOsnovy_metodolohii_ta_orhanizatsii_naukovykh_doslidzhen.pdf&name=Osnovy_metodolohii_ta_orhanizatsii_naukovykh_doslidzhen.pdf&lang=uk&c=5765b6449220 [in Ukrainian].
4. Osnovy naukovykh doslidzhen : naukovo-dopomizhnyi bibliohrafichnyi pokazhchyk [Elektronnyi resurs] / Sumskyi derzhavnyi pedahohichnyi universytet imeni A. S. Makarenka, Naukova biblioteka; ukladachi: I. O. Zhelezniak, V. V. Kosenko ; red. V. V. Kosenko ; peredmova V. V. Kosenko. – Sumy: SumDPU im. A. S. Makarenka, 2014. – 284 s. – Rezhym dostupu: http://library.sspu.sumy.ua/biblioteka/bibliografichni_pokazhchyky/2014/1_g.pdf [in Ukrainian].
5. Stechenko D. M. Metodolohiia naukovykh doslidzhen. Pidruchnyk [Elektronnyi resurs] / D. M. Stechenko, O. S. Chmyr. – K. : Znannia, 2005. – 309 s. – Rezhym dostupu: http://toloka.to/t39664 [in Ukrainian].

4.2 Support literature:

1. Artiukh S. Osnovy naukovykh doslidzhen : [pidruchnyk] / S. Artiukh // Ukrainska inzhenerno-pedahohichna akademiia. – Kh. : UIPA, 2006. – 277 s [in Ukrainian].
2. Afanasiev A. Osnovy naukovykh doslidzhen : navch. posibnyk / A. Afanasiev // Kharkivskyi natsionalnyi ekonomichnyi un-t. – Kh. : KhNEU, 2005. – 96 s [in Ukrainian].
3. Bilousova T. Osnovy naukovykh doslidzhen : navch. posib. dlia stud. vyshch. navch. zakl. / T. Bilousova // Kamianets-Podilskyi derzh. un-t. – Kamianets-Podilskyi, 2004. – 120 s [in Ukrainian].
4. Bilukha M. T. Metodolohiia naukovykh doslidzhen : pidruchnyk / M. T. Bilukha. – K. : ABU, 2002. – 480 s [in Ukrainian].
5. Habovych A. Osnovy naukovykh doslidzhen : pidruch. dlia stud. vyshch. navch. zakl., yaki navch. za napriamom «Informatsiina bezpeka» / A. Habovych // Derzhavnyi un-t informatsiino-komunikatsiinykh tekhnolohii. – K. : DUIKT, 2006. – 174 s [in Ukrainian].
6. Hryshchenko I. Osnovy naukovykh doslidzhen : navch. posibnyk / I. Hryshchenko // Kyivskyi natsionalnyi torhovelno-ekonomichnyi un-t. – K. : Vyd-vo KNTEU, 2001. – 185 s [in Ukrainian].
7. Ierina A. M. Metodolohiia naukovykh doslidzhen : navchalnyi posibnyk / A. M. Yerina. – K. – 2004. – 212 s [in Ukrainian].
8. Kovalchuk V. Osnovy naukovykh doslidzhen : navchalnyi posibnyk / V. Kovalchuk, L. Moisieiev ; pid nauk. red. V. O. Drozdova ; M-vo nauky i osvity Ukrainy, Akad. ped. nauk Ukrainy, Pivdennyi nauk. tsentr APN Ukrainy. – 3-ye vyd. pererob. i dop. – K. : VD «Profesional», 2005. – 238 s [in Ukrainian].
9. Sidenko V. M. Fundamentals of scientific research / V. M. Sidenko, I. M. Grushko. - Kharkiv, Vishcha school, 2002. 200 p [in Russian].
10. Filipenko A. S. Osnovy naukovykh doslidzhen. Konspekt lektsii : posibnyk / A. S. Filipenko. – K. : Akademvydav, 2004. – 208 s [in Ukrainian].

Educational content

5. Methods of mastering the discipline (educational component)

Lectures

№	The title of the lecture topic and a list of key issues (tasks for independent work of students)
1	**Topic 1.1. Science as a system of knowledge and the sphere of human activity** The concept of science: definition and role. Descriptive, prognostic, design design, technology and other functions of science. Science as social institute. Historical preconditions for the emergence of science. Stages of development of science. Scientific revolutions. Classification of sciences. Organization of scientific activity in Ukraine. Objectives of science. The concept of scientific knowledge, its driving forces. Types of scientific knowledge: differences, genesis. Basic forms of scientific knowledge. Organization of research activities of the postgraduate student working day, workplace and personal archive, technical means of scientific activity researcher. **Tasks for Self-study:** 1. Define the concept of science. 2. Describe the descriptive, prognostic, design, technological and other functions of science. 3. To reveal the understanding of science as a social institution. 4. Describe the historical background of science. 5. Identify the stages of development of science. 6. Analyze the main scientific revolutions. 7. Give the classification of sciences. 8. Describe the organization of scientific activity in Ukraine.
2	**Topic 2.4. Conceptual and categorical apparatus of psychological research** Theory and its categorical basis. Development of conceptual and categorical apparatus as the first stage of psychological research. Rationale relevance of the research topic. Identifying the problem situation. Study of the theoretical and practical state of problem development. Psychological research as a special type of scientific activity. Concept about the object, subject of research, scientific problem, purpose, hypothesis, task, research concept. Preparation of psychological research: program development. Empirical bases of scientific research. The concept of scientific fact. Scientific research as a process. Types of research by purpose. Prediction of scientific novelty, theoretical and the practical significance of the research results. Types of psychological research. Stages of research in psychology. Preparatory organizational stage. Search and analysis of documentary information. Objectives collection of primary and secondary information on the research topic. Logic construction of the text of the theoretical part of the scientific work. Basic criteria correctness of writing a review of the literature on the research topic. Substantiation of the sample. The concept of method, methodology research. Classification of general scientific research methods. Characteristics of methods of theoretical level of cognition. Characteristic methods of empirical level of knowledge. Algorithm for describing the technique research. Preparation of collected data for processing (rejection, coding, generalization of open answers, introduction to the PC). Getting and analysis of empirical information. Rules for describing the results of the empirical research. **Tasks for Self-study:** 1. To reveal the concept of theory and its categorical basis.

	2. Describe the development of conceptual and categorical apparatus as the first stage of psychological research. 3. To reveal the significance of the theoretical and practical state of development problems for psychological research. 4. Give the definition of the object and subject of research. 5. Explain the concept of goals and objectives of the study. 6. Define the concept of working hypothesis. 7. Give the criteria for choosing research methods. 8. Define the concept of scientific novelty, theoretical and practical significance of research results.
3	**Topic 3.2. Requirements for the preparation and design of the dissertation research in the specialty 053 Psychology** General recommendations for the design of qualification works. Requirements to formulate the topic of qualification works. Requirements for individual's components of the work. Requirements for formatting work. Requirements to scientific style of speech. Basic requirements for abstracting and citations of literature. The concept of copyright. **Tasks for Self-study:** 1. Formulate general recommendations for design qualification works. 2. Give the requirements for the formulation of the topic of qualification works. 3. Describe the requirements for individual components of the work. 4. Give the requirements for formatting the work. 5. Formulate requirements for the scientific style of speech. 6. Describe the basic requirements for abstracting and citing literature. 7. Explain the concept of copyright.

Seminar (Practical Training)

The main tasks of the cycle of seminar (practical training) are the formation of postgraduate students:
• systematic knowledge of theoretical foundations, methods, technologies and organization of scientific research activities of a psychologist;
• ability to search, systematize, theoretical and methodological analysis of scientific sources;
• ability to formulate and study a scientific problem, develop a work program research;
• ability to select and substantiate methodological tools of scientific research;
• ability to collect, record and process the results of empirical / experimental research;
• ability to analyze the results of mathematical and statistical processing of the obtained information;
• ability to develop conclusions and guidelines for solving the problem the results of a psychological study;
• ability to compose, correctly draw up the final document of psychological research (text of the dissertation);
• experience of abstract design of the results of theoretical and methodological analysis.

№	The name of the subject and the list of key issues (list of didactics, references to literature and assignments on the SS)
1	**Topic 2.2. Theoretical methods of psychological research** 1. Methods of psychology. Typology of methods. Method. 2. Theoretical research methods in psychology, in particular analysis, reconstruction, modeling, forecasting. 3. Operationalization of concepts in theoretical research. Theoretically significance of the study. 4. Design of the theoretical part of the work.

	5. The order of processing of literary sources. **Tasks for Self-study:** 1. Identify and describe the basic methods of psychology. 2. Give the typology of methods. 3. Define the methodology and give examples of application of techniques in psychological research. 4. Identify theoretical research methods in psychology, in particular analysis, reconstruction, modeling, forecasting. 5. Illustrate the operationalization of concepts in theoretical research in psychology. 6. Give the basic requirements for the design of the theoretical part of the work. 7. Determine the order of processing of literary sources.
2	**Topic 2.3. Empirical methods of psychological research** 1. The empirical part of the study. Types of experiment. 2. Methods of obtaining empirical material. 3. Definition of variables. The concept of a sample of subjects. Requirements to samples. 4. Pilot study. 5. Instruction. Experimental procedure. 6. Processing and analysis of research data. **Tasks for Self-study:** 1. Describe the specifics of the content of the empirical part of the study. 2. Give the classification of experimental species. 3. Analyze the methods of obtaining empirical material. 4. To reveal the concept of the sample of subjects. 5. Describe the basic requirements for the sample. 6. Explain the concept of aerobatic research. 7. Give the basic requirements for processing and analysis of research data.
3	**Topic 3.1. Types of psychological research and stages of their conduct** 1. Types of psychological research. 2. Stages of psychological research. 3. Development of conceptual and categorical apparatus of research. 4. Development and experimental verification of the model, the main ideas, conceptual provisions underlying the study. 5. Conducting research. 6. Processing of research data and registration of results. 7. Analysis and interpretation of research results. Conclusions. **Tasks for Self-study:** 1. Describe the types of psychological research. 2. Identify the stages of psychological research. 3. To develop the conceptual and categorical apparatus of dissertation research. 4. Define the procedure for conducting the study. 5. To reveal methods of data processing and formation of conclusions.

6. Independent Works of students

Postgraduate students independently study the following issues:

Topic 1.2. General methodological bases of scientific researches

Scientific research as a form of implementation and development of science. Classification of scientific research. General scientific principles: unity theory and practice, determinism, complementarity, selforganization, systemicity, invariance. Requirements for scientific methods research. Classification of methods. The problem of conceptual and categorical apparatus of scientific research.

Topic 2.1. General psychological and specific psychological principles
General psychological principles of research. The principle of unity of psyche and activity. The principle of unity of personality and its vital activity. The principle of personal approach. Principle objectivity of psychological research. The principle of historicism. The principle of the study psychological phenomena in their development. The principle of self-development. The principle of subjectivity. The principle of systematization. Specific psychological principles of research.

Topic 3.3. Presentation and implementation of the results of psychological research
Forms of reflection of research results. The concept of a scientific article and its structure. Abstracts of the report at the scientific conference. Features of preparation of visual material to protect the results of the study: computer presentations, slide presentations, poster reports. Implementation of research results.

Policy and control

Course policy (educational component)

Working on the study material of the credit module "Methodology of scientific research", postgraduate students perform an individual semester task through training abstract. The purpose of writing an abstract is to confirm the level of mastery of basic postgraduate students provisions on selected topics, demonstration of knowledge of relevant literature; skills analyze the material, make generalizations and independent conclusions.

Work on the abstract involves an in-depth study of the chosen psychological problems, modern scientific literature, as well as mastering the skills of logical analysis and generalization of the material, its systematic presentation. The topic of the abstract is chosen by the postgraduate student independently within two weeks from the beginning of the semester, based on the proposed list. In addition to the proposed, postgraduate students can choose the topic of the abstract, required agreeing it with the teacher. Approximate topics of abstracts and content requirements and clearance are contained in Annex 1.

Postgraduate students submit an essay to the Department of Psychology and Pedagogy two weeks before exam.

Attendance and performance of tasks

Attendance at lectures is not assessed, but is desirable because it is educational the material is presented in an accessible form and there is an opportunity to discuss issues of discussion and clarification of unclear points. You do not need to practice missed lectures.

Active participation of the postgraduate student in seminars is mandatory. Postgraduate rating will be largely formed by the results of his work in seminars. Every missed seminar (regardless of the reasons for skipping) lowers the final rating postgraduate student in the discipline. In case of skipping a seminar, they must be studied topics, and all tasks are completed. Control of knowledge (understanding) by the postgraduate student of the missed subjects (performance of tasks) will take place during communication with the teacher according to the schedule of consultations, available on the website of the Department of Psychology and Pedagogy. The postgraduate student who performs the relevant tasks (answer the question) will receive the appropriate points for the rating depending on the quality of the answers (task performance).

The postgraduate student in the seminar can use the written ones prepared by him notes on the topic of the lesson (or provided by the task), but to express a position reading from a sheet of paper is not worth it.

Forms of work

Lectures and seminars. Topics of lectures are covered in the work program (syllabus) discipline. Questions from postgraduate students to the teacher are welcomed during the lecture. Allowed and welcomed dialogue between postgraduate students and the teacher at the lecture. Postgraduate students focus on their practical classes attention to the analysis of the methodological validity of modern scientific research in the psychology field and master active techniques of discussion management.

University policy

Academic integrity

The main types of academic responsibility are established by the Law of Ukraine "On Education". According to Part 6 of Article 42 to the main types of academic responsibility of students include: re-assessment (test, exam, test, etc.); again passing the relevant educational component of the educational program; deductions from the institution education; deprivation of an academic scholarship; deprivation of benefits provided by the educational institution for payment for teaching.

Policies, standards, and procedures for academic integrity include the following regulatory documents of the Igor Sikorsky Kyiv Polytechnic Institute, published on the University website: Code of The Honor of the Igor Sikorsky Kyiv Polytechnic Institute https://kpi.ua/files/honorcode.pdf, System Regulations prevention of academic plagiarism https://rb.gy/agihij, as well as legal documents, official recommendations, orders and directives, sociological research of the Igor Sikorsky Kyiv Polytechnic Institute, methodical materials, educational courses https://kpi.ua/academic-integrity.

Among the technological solutions in the fight against violations of academic integrity within the study of the course "Methodology of scientific research"," can be noted: verification prepared abstract on plagiarism. The test is performed in the Detection System matches/identity/similarity of the text from the company Unichek. In case of detection of academic plagiarism, the authors are responsible for the work of employees and applicants for the higher education of the University in accordance with current legislation, including those provided by the Law of Ukraine on Education.

Norms of ethical behavior

Norms of ethical behavior of students and employees are defined in Section 2 of the Code of Honor of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute". Details: https://kpi.ua/code, as well as in the Regulations on the Commission on Ethics and Academic Integrity of Igor Sikorsky Kyiv Polytechnic Institute https://data.kpi.ua/sites/default/files/files/2015_1-140a1.pdf.

7. Types of control and rating system for assessing learning outcomes (Rating system)

Current control: survey on the topic of the lesson, task performance.
Semester control: exam.

Evaluation and control measures

The rating in the discipline consists of points obtained for:
1) speech on the chosen topic (dissertation);
2) execution of an individual task (abstract);
3) examination control work.

The postgraduate student will receive the highest rating if he takes an active part in the conducted seminars, provides complete and reasoned answers, logically teaches them, expresses his own position on debatable issues. Proper preparation of a postgraduate student for a seminar will take an average of 1-1.5 hours. Detailed criteria for evaluating learning outcomes for postgraduate students are defined in the regulations on rating system in the discipline and are presented in Annex 2.

The postgraduate student can challenge the teacher's assessment by filing a complaint to the teacher no later than the next day after acquainting the postgraduate student with the teacher's grade. Complaints will be considered according to the procedures established by the university.

A prerequisite for admission to the exam is a rating (Rc) of at least 50% of RC, ie 20 points. The exam is conducted in writing. Time of examination control work - 90 minutes. The control task contains 2 questions on thematic sections of the credit module. An indicative list of questions for the examination test is contained in Annex 3.

Table of correspondence of rating points to grades on the university scale:

Number of points	*Evaluation*
100-95	Excellent
94-85	Very good
84-75	Good
74-65	Satisfactorily
64-60	Sufficient
R < 60	Insufficient
Admission conditions are not met	Not admitted

8. Additional information on the discipline (educational component)

When studying the discipline "Methodology of scientific research" postgraduate student has use, in first of all, the literature, which is defined in the main list and is in the funds of Scientific and Technical Library of Igor Sikorsky Kyiv Polytechnic Institute. An additional source of information should be lecture notes. Postgraduate students are also recommended to find the latest materials through Internet psychological research.

The content of the discipline is realized through the mastery of three blocks: theoretical and practical and the unit of independent work. Mastering the theoretical block is carried out in the process of working on lectures and literature processing. Specifics are practiced at seminars skills and abilities to analyze the theoretical foundations, methods, technologies and organization of scientific research activities of a psychologist, the ability to argue and defend their own point of view.

Mastering the discipline "Methodology of scientific research" involves a comprehensive approach when choosing forms and methods of teaching. The essence of this approach is a combination of lecture classes and various forms of independent work, including: work in a seminar; preparation of reports and presentations at seminars.

The seminar gives an opportunity to identify the level of preparation for it (speech, participation in discussions, expression of one's own opinion). Criteria for evaluating the performance of seminar tasks classes are: logical sequence of answers; completeness of disclosure of each issue; analytical reasoning in response; references to sources; the validity of personal conclusions. In the process work with literature and notes, it is important to record bibliographic information of the source and page numbers from which opinions were borrowed for further reference to sources. Previously prepared materials are processed, include their own analysis.

Extracurricular activities

Possible participation of postgraduate students in informal circles, in particular in the open group PhD-incubator https://www.facebook.com/groups/2735550373369832/

Distance Learning

Synchronous distance learning is possible using video conferencing platforms and educational platform for distance learning at the university.

Inclusive education
Allowed

The Work program of the discipline (Syllabus):

Compiled of Head of the Department, Professor, Doctor of Psychological Sciences, Volianiuk Nataliia Yuriivna

Approved by the Department of Psychology and Pedagogy (Protocol № ___ of _____)
Approved by Methodical Commission of Faculty (Protocol № ___ of _____)

Annex 1

Approximate topics for abstracts

1. Science as a sphere of human activity.
2. The main features of science as a specific activity. Objectives of science.
3. The concept of scientific knowledge, its driving forces.
4. Types of scientific knowledge, their genesis.
5. Basic forms of scientific knowledge.
6. The concept of research activities.
7. The concept of psychological research as a special type of scientific activity.
8. The main stages of psychological research.
9. Algorithm for developing a program of psychological research.
10. The concept of scientific problem, problem situation.
11. Classification of methods of psychological research.
12. The concept of sampling. Types of sample populations. Methods of forming sample sets.
13. Determining the size of the sample.
14. Scientific thinking in the organization and conduct of scientific research.
15. Features of the choice of direction and sequence of scientific research.
16. System approach, its place and role in scientific knowledge.
17. Features of experiment planning and analysis of its results
18. Technology of scientific activity.
19. Scientific teams and schools as special structures in science.
20. Ethics of scientific research.
21. General scientific principles of scientific research.

The structure of the abstract

The style of presentation of the material should be a scientific and business.

The material is distributed evenly in accordance with the plan of the abstract:

- introduction (the relevance and practical significance of the chosen topic must be substantiated abstract, defined purpose and objectives of the work);

- the main part (the topic of the abstract is revealed by covering the main issues. It is necessary to focus on the analysis of the questions in the literature with conclusions regarding their theoretical and practical significance;

- conclusions (it is necessary to formulate:

a) scientific-theoretical and practical results of the analysis on the issue abstract;

b) theoretical and practical recommendations arising from the analysis. They should be logically related to the content of the presented material);

- list of references (contains used sources and publications).

Requirements for writing an abstract

The volume of the abstract should be 1 printed sheet (24 pages). The total volume of the work does not include appendices, glossary, list of sources used, tables and figures, which completely occupy the area of the page. But all pages of these elements are subject to continuous numbering. The text must contain references to the literature and other sources used in the preparation of the abstract.

The text of the abstract is presented in the state language on standard sheets of the format A-4 (210 x 297).

The work is printed in Times New Roman font, 14 point; alignment - "Width"; line spacing "One and a half" (1.5 Lines); paragraph indent - five characters (1.25 cm); top and bottom margin - 2 cm, left - 3 cm, right - 1 cm. Paragraph indentation should be the same throughout the text and equal to five signs (1.25 cm).

Sections and subsections should contain headings that should be accurately reproduced in the table of contents. Section headings are usually placed in the middle of the line. Section titles are capitalized letters without punctuation marks at the end, without underscores. Section headings should start with proper indentation.

Page numbering must be continuous. The serial number of the page is indicated in Arabic number and put in the upper right corner of the page without dots or dashes. Title the sheet is included in the general page numbering of the written work, but the page number on the title page is usually not affixed. Sections should also be numbered in Arabic numerals.

When using literary sources in the text of a written work there can be two options links to them. The first is page links (footnotes): when a page cites a source, then at the bottom of this page under the main text is a bibliographic description of the literary source and the page is specified. The second - when in the case of a reference to a literary source in square brackets indicate its serial number in the bibliography and a specific page, quote, exact figures, data.

Illustrative material - drawings, graphics, diagrams, etc. should be posted directly after the first reference to it in the text. If the graph, diagram, table does not fit on the page, where there are links, they are provided on the next page. Each illustrative material should be linked in the text.

The maximum number of points for the abstract is 20 points.

Each abstract is evaluated based on an analysis of a set of the following criteria:

1. Relevance of the topic.

2. The plan and content of the abstract should systematically reveal the chosen topic.

3. Personal contribution is estimated from the presence of own analytical conclusions.

4. Used sources, ie the presence of a sufficient number of modern regulatory and scientific sources.

Annex 2

Rating system for assessing learning outcomes

The rating in the discipline consists of points obtained for:
1) speech on the chosen topic (dissertation);
2) execution of an individual task (abstract);
3) examination control work.

System of rating (weight) points and evaluation criteria:

1. Speech on the chosen topic (dissertation) maximum number of points is 24 (the number of points in 1 seminar - 8):

active participation in the lesson; providing a complete and reasoned, logical the presented report, the answer, statement of own position on debatable questions or completely correct solution of problems with the corresponding substantiation, incombined with appropriate additions to the answers of other postgraduate in the discussion	6-8
active participation in the lesson; giving the right answers or the right ones solving problems with minor inaccuracies, violations of the logic of teaching answers or justification in solving the problem	3-5
providing answers with numerous significant errors or solving the problem with gross errors, solving the problem without justification	1-2

2. Execution of an individual task (abstract) (maximum number of points is 16)

the topic of the abstract is relevant, the plan and content of the abstract systematically reveal the selected topic, there are analytical conclusions of the postgraduate, in the preparation of the abstract used sufficient number of normative and scientific sources	12-16
the topic of the abstract is relevant, the plan and content of the abstract systematically reveal the selected topic, a sufficient number of normative and scientific ones were used in the preparation of the abstract sources but there are no analytical conclusions of the postgraduate	8-11
the topic of the abstract is relevant, but the plan and content of the abstract are not sufficiently disclosed selected topic, there are no analytical conclusions of the postgraduate in the preparation of the abstract a sufficient number of normative and scientific sources were used	4-7
the topic of the abstract is relevant, but the plan and content of the abstract do not disclose the selected topic, there are no analytical conclusions of the postgraduate, used in the preparation of the abstract insufficient number of normative and scientific sources	1-3

3. Exam: examination test is conducted in writing for 90 minutes.
Examination test maximum number of points is 60. Examination the ticket consists of two theoretical questions on thematic sections of the course. A significant score for everyone question is 30.

a complete, clear, logical answer to the question that testifies about a deep understanding of the essence of the issue, acquaintance of the postgraduate not only with the material lectures, but also with a textbook and additional literature; statements by the postgraduate student own position on the issues of discussion, if such are raised in the issue	25-30
the answer to all the questions, but not quite complete or not clear enough that	19-24

indicates a correct understanding of the essence of the issue, acquaintance of the postgraduate with material of lectures and textbook; certain inaccuracies in the answer	
enough superficial answer to all questions; significant errors in answers; lack of answer to one question with the correct, in general, answer to others	10-18
correct answer to only one question in the absence of answers to others or with incorrect answers to them	5-9
incorrect answer to the questions, which indicates ignorance relevant learning material, but an attempt to express one's own understanding the essence of the question; no answer	0-4

Rating scale (R):

The sum of weight points of control measures during the semester is:
RS = 10 + 30 = 40 points
The examination component of the scale is equal to 60% of R, namely:
RE = 60 points.
Thus, the rating scale of the discipline is:
R = RC + RE = 100 points.
A prerequisite for admission to the exam is a rating (Rc) of at least 50% of RC, ie 20 points.

To receive the postgraduate appropriate grades (ECTS and traditional) his rating (RD) is translated according to the table:

RD	**ECTS assessment**	**The assessment is traditional**
95 – 100	Perfectly	Perfectly
85 – 94	Very good	Good
75 – 84	Good	
65 – 74	Satisfactorily	Satisfactorily
60 – 64	Enough (meets minimum criteria)	
RD < 60	Unsatisfactorily	Unsatisfactorily

Annex 3

An indicative list of questions for the examination control work

1. Define the concept of science.
2. Describe the descriptive, prognostic, design, technological and other functions of science.
3. To reveal the understanding of science as a social institution.
4. Describe the historical background of science.
5. Identify the stages of development of science.
6. Analyze the main scientific revolutions.
7. Give the classification of sciences.
8. Describe the organization of scientific activity in Ukraine.
9. To reveal the concept of theory and its categorical basis.
10. Describe the development of conceptual and categorical apparatus as the first stage psychological research.
11. To reveal the significance of the theoretical and practical state of problem development for psychological research.
12. Give the definition of the object and subject of research.
13. To reveal the concept of the purpose and objectives of the study.
14. Define the concept of working hypothesis.
15. Give the criteria for choosing research methods.
16. Define the concepts of scientific novelty, theoretical and practical significance research results.
17. Formulate general recommendations for the design of qualification works.
18. Give requirements for the formulation of the topic of qualification works.
19. Describe the requirements for individual components of the work.
20. Give the requirements for formatting the work.
21. Formulate requirements for the scientific style of speech.
22. Describe the basic requirements for abstracting and citing literature.
23. Explain the concept of copyright.
24. Identify and describe the basic methods of psychology.
25. Give the typology of methods.
26. Define the methodology and give examples of application of techniques in psychological research.
27. Identify theoretical research methods in psychology, in particular analysis, reconstruction, modeling, forecasting.
28. To illustrate the operationalization of concepts in theoretical research in psychology.
29. Give the basic requirements for the design of the theoretical part of the work.
30. Determine the order of processing of literary sources.
31. Describe the specifics of the content of the empirical part of the study.
32. Give the classification of experimental species.
33. Analyze the methods of obtaining empirical material.
34. To reveal the concept of a sample of subjects.
35. Describe the basic requirements for the sample.
36. To reveal the concept of aerobatic research.
37. Give the basic requirements for processing and analysis of research data.
38. To substantiate scientific research as a form of realization and development of science.
39. Give the classification of scientific research.
40. Describe the general scientific principles of scientific research.
41. Formulate requirements for research methods.
42. Give a classification of research methods.
43. To reveal the problem of conceptual and categorical apparatus of scientific research.
44. Identify the general psychological principles of the study.
45. Illustrate the principle of unity of psyche and activity in scientific research.
46. To illustrate the principle of unity of personality and its vital activity in scientific research.

47. Illustrate the principle of personal approach in research.
48. Illustrate the principle of objectivity of psychological research.
49. Illustrate the principle of historicism in scientific research.
50. Illustrate the principle of research of psychological phenomena in their development.
51. Illustrate the principle of self-development in research.
52. Illustrate the principle of subjectivity in research.
53. Illustrate the principle of systematization in research.
54. Identify the psychological principles of the study.
55. Identify types of psychological research.
56. Describe the stages of psychological research.
57. Give a strategy for developing a conceptual and categorical apparatus of research.
58. Give ways to develop and experimentally test the model, the main ideas, and conceptual provisions underlying the study.
59. Give the types and methods of processing research data and design results.
60. Describe the procedures for analysis and interpretation of research results.
61. Analyze the forms of reflection of the results of scientific research.
62. Explain the concept of a scientific article and its structure.
63. Explain the concept of the thesis of the report at a scientific conference.
64. Analyze the features of the preparation of visual material to protect the results research: computer presentations, slide reports, poster presentations.
65. Define the concepts and features of the implementation of research results.