Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA NAMED AFTER PATRICE LUMUMBA

RUDN University

Academy of Engineering

educational division (faculty/institute/academy) as higher education programme developer

COURSE SYLLABUS

Methodology of Scientific Research

course title

Recommended by the Didactic Council for the Education Field of:

27.04.05 Innovatics

field of studies / specialty code and title

The course instruction is implemented within the professional education programme of higher education:

Digital transformation in production management

higher education programme profile/specialization title

2024

1. THE PURPOSE OF MASTERING THE DISCIPLINE

The goal of mastering the discipline is to obtain knowledge, skills, abilities and experience in the field of methodology of scientific research, characterizing the stages of the formation of competencies and ensuring the achievement of the planned results of mastering the educational program.

2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

Mastering the discipline is aimed at developing the following competencies (parts of competencies) among students:

Table 2.1 – The list of competencies formed by students in the course of mastering the discipline (the results of mastering the discipline)

Competency code	Name of competence	Competence achievement indicators (within this discipline)
GPC-3	Able to design the organization of joint and individual educational and educational activities of students, including those with special educational needs	GPC-3.1. Competently projects the organization of joint and individual educational and educational activities GPC-3.2. Possesses the skills of organizing joint and individual educational activities of students with special educational needs
GPC-9	Able to possess tools for working with large amounts of structured and unstructured information, use modern digital methods of processing, analysis, interpretation and visualization of data in order to solve problems professional and research psychological and pedagogical activities	GPC-9.1. Effectively uses modern digital methods of processing, analysis, interpretation and visualization of data in order to solve the tasks of professional and research psychological and pedagogical activities GPC-9.2 Demonstrates the skills of using tools for working with large amounts of structured and unstructured information

3. THE PLACE OF DISCIPLINE IN THE STRUCTURE OF OP VO

The discipline refers to the mandatory part of the OP VO.

Within the higher education programme students also master other disciplines and internships that contribute to the achievement of the expected learning outcomes as results of the subject mastery.

Table 3.1 – The list of components of the OP VO that contribute to the achievement of the planned results of the development of the discipline

Competency code	Name of competence	Previous disciplines, practices	Subsequent disciplines, practices
GPC-3	Able to design the organization of joint and individual educational and educational activities of students, including those with special educational needs	-	Preparation for passing and passing the state exam; Execution, preparation for the defense procedure and defense of the final qualification work
GPC-9	Able to possess tools for working with large amounts of structured and unstructured information, use modern digital methods of processing, analysis, interpretation and visualization of data in order to solve problems professional and research psychological and pedagogical activities	-	Preparation for passing and passing the state exam; Execution, preparation for the defense procedure and defense of the final qualification work

4. VOLUME OF DISCIPLINE AND TYPES OF EDUCATIONAL WORK

The total complexity of the discipline is 2 credit units.

Table 4.1 – Types of educational work by periods of development of OP VO

Type of study work		Total, academic hour	Semester 1
Contact work		36	36
Including:			
Lecture		18	18
Seminar classes		18	18
Independent work of the student		36	36
The total complexity of the discipline	Academic hours	72	72
	Credit units	2	2

5. CONTENT OF THE DISCIPLINE

Table 5.1 – The content of the discipline by type of educational work

Name of the discipline section	Contents of the section (topic)	Types of educational work
Section 1. General characteristics of the methodology of pedagogical research	Topic 1. Scientific pedagogical research activities in the system and process of education. The structure of scientific knowledge. Specifics of pedagogy as a science. Forms of organization of scientific knowledge. Sources and terms of research search. Topic 2. Methodology of scientific pedagogical research. The concept and functions of methodology in pedagogy. Levels of methodology. Conceptuality of pedagogical research.	LC, SM, AW
Section 2. Methodological foundations of research work	Topic 1. Conceptual and categorical apparatus of scientific research activities. The concept of pedagogical research. The general concept of cognition, research, research activity. Basic concepts: problem, object, subject and goals of research. Relationships, relationships between the problem, subject and purpose of the study. Topic 2. Main structural components of psychological and pedagogical research Research methodology. Research topic. The relevance of research. Formulation of contradictions. Formulating the problem. Definition of the object, subject, hypothesis, purpose and objectives of the study.	LC, SM, AW
Section 3. Methodology of psychological and pedagogical research	Topic 1. Methods of psychological and pedagogical research. Research methods and techniques. Topic 2. Methods of empirical psychological and pedagogical research. Methods of theoretical research. Topic 3. Statistical methods and means of formalization	LC, SM, AW
Section 4. Technology of organization pedagogical research	Topic 1. Logic and structure of psychological and pedagogical research. Specifics of psychological and pedagogical research. Development of logic and research strategy. Topic 2. Stages of constructing the logic of research: staging, actual research and design and implementation.	LC, SM, AW
Section 5. Technologies for its design and presentation results	Topic 1. Presentation of research results. Presentation of research work. Topic 2. Scientific text: characteristics. Types, forms of presentation. A dissertation is a specific type of scientific text. Topic 3. Planning and organization of scientific and experimental work in an educational institution. Specifics of organizing research work in different types of educational institutions.	LC, SM, AW

* LEC - lecture, SM - seminars; IW - independent work

6. LOGISTICS AND TECHNICAL SUPPORT OF THE DISCIPLINE

Table 6.1 – Logistics of discipline

Types of Auditorium	Audience equipment	Specialized educational / laboratory equipment, software and materials for mastering the discipline (if necessary)
Lecture	An auditorium for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations	-
Seminar	An auditorium for conducting seminar-type classes, group and individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and technical means for multimedia presentations	-
For independent work of	An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and	-

students	computers with access to EIOS	

7. EDUCATIONAL-METHODOLOGICAL AND INFORMATION SUPPORT OF THE DISCIPLINE

Main literature:

1) Buhalkov M.I. Personnel Management: Textbook for Universities / 2nd ed.. M.: Инфра-М. 2008. 400 с.

2) Kibanov A.Y. Personnel management of the organization: Practicum: Textbook / Ed. by A.Y. Kibanov. 2nd ed. M.: Infra-M. 2008. 365 с.

Additional literature:

1. Neverov A.V. Personnel assessment as a factor in the social development of the organization. Monograph / M.: RUDN University Publishing House. 2015. 180 p. Electronic resource.

1) Mikhailova O.B. Theory and practice of personnel management. Textbook / M.: RUDN University Publishing House. 2013. 195 p. Electronic resource.

1. Antsupov A.Ya., Kovalev V.V. Socio-psychological assessment of personnel: Textbook / 2nd ed. M.: UNITY-DANA. 2012. 399 p. Electronic resource.

2) Egorshin A.P. Fundamentals of personnel management. Textbook / 2nd ed. Moscow: Infra-M. 2008. 352 p. Electronic resource.

1. Odegov Yu.G., Nikonova T.V. Audit and controlling of personnel. Textbook / M.: Alfa-Press. 2006. 560 p.

The electronic library system (ELS) of RUDN University and third-party EBS, to which university students have access on the basis of concluded contracts:

− ELS RUDN http://lib.rudn.ru/MegaPro/Web
− ELS «University Library Online» http://www.biblioclub.ru
− ELS Юрайт http://www.biblio-online.ru
− ELS «Student Advisor» www.studentlibrary.ru
− ELS «Троицкий мост»

Databases and browsers:

− Electronic fund of legal and normative-technical documentation http://docs.cntd.ru/
− Yandex search https://www.yandex.ru/
− Google search https://www.google.ru/
− Abstract database SCOPUS http://www.elsevierscience.ru/products/scopus/

Educational and methodological materials for independent work of students in the development of the discipline*:

1) A course of lectures on the discipline.

* all educational and teaching materials for independent work of students are placed in accordance with the current procedure on the discipline page in the telecommunication educational in-formation system (TEIS) of RUDN

8. EVALUATION MATERIALS AND SCORE-RATING SYSTEM FOR ASSESSING THE LEVEL OF FORMATION OF COMPETENCES IN THE DISCIPLINE

Evaluation materials and a point-rating system for assessing the level of formation of competencies (parts of competencies) based on the results of mastering the discipline are presented in the Appendix to this Work Program of the discipline.

DEVELOPERS:

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