APPROVED at the meeting of the
Academic Council of JSC
"Sh. Yesenov Caspian University
of Technology and Engineering".
Minutes No. 09 dated May 26, 2026.

The program of the entrance exam for applicants to the PhDfor the of educational programs D001– «Pedagogy and Psychology»

1. General provisions.

1. The program was drawn up in accordance with the Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 No. 600 “On Approval of the Model Rules for Admission to Education in Educational Organizations Implementing Educational Programs of Higher and Postgraduate Education” (hereinafter referred to as the Model Rules).

2. The entrance exam for doctoral studies consists of writing an essay, an exam in the profile of a group of educational programs and an interview.

Block	Points
1. Interview with the applicant conducted by the admissions examination committee of the higher education institution	**30**
2. Essay	**20**
3 Exam in the specialty of the educational program group	**50**
Total	**100**

3. The duration of the entrance examination is 3 hours and 30 minutes, during which the applicant undergoes an interview, writes an essay, and responds to an electronic examination ticket. The interview is conducted at the higher education institution prior to the entrance examination.

2. Procedure for the entrance examination.

1.Applicants for doctoral studies in the group of educational programs **8D01101 – «Pedagogy and Psychology**» write a problematic / thematic essay. The volume of theessay is at least 250-300 words.

2.The electronic examination card consists of 3 questions.

Exam Preparation Topics Specialty: 8D01101 – «Pedagogy and Psychology»

Discipline Pedagogy of Higher Education

TOPIC 1. Subject, Object, and Functions of Pedagogy as a Science
Pedagogy is a science that studies the laws of education, teaching, and personal development. Its object is the educational process, while its subject is the pedagogical patterns and mechanisms within this process. The main functions of pedagogy are theoretical, technological, and prognostic. At the present stage, pedagogy is integrated with social and humanitarian sciences.

TOPIC 2. Methodological Foundations of Pedagogy and Research Methods
The methodology of pedagogy includes philosophical, general scientific, and specific scientific levels. Research methods include observation, experiment, surveys, content analysis, and pedagogical modeling. At the doctoral level, the unity of empirical and theoretical methods is especially important. Methodological culture is an indicator of a researcher's professional competence.

TOPIC 3. Evolution of Educational Paradigms
The history of education includes traditional, technocratic, humanistic, and competence-based paradigms. The modern higher education system is focused on a learner-centered and outcome-oriented paradigm. Paradigm shifts are linked to societal demands. They influence the content, methods, and assessment systems of education.

TOPIC 4. Theories of Personality Development and Pedagogical Interpretation
Personality development is examined through biogenetic, sociogenetic, and cultural-historical theories. For example, Lev Vygotsky's cultural-historical theory introduces the concept of the "zone of proximal development." This theory proves the leading role of learning in development. For educators, it provides a scientific basis for organizing support and collaboration in teaching.

TOPIC 5. Theory of Education and Value Orientations
Education is the process through which an individual acquires social experience. The modern educational system is based on national and universal human values. The content of education includes civic, moral-spiritual, and professional dimensions. In higher education, upbringing is realized through professional ethics and academic integrity.

TOPIC 6. Didactics and Laws of Learning
Didactics is the theory of learning that studies its content, principles, and methods. Learning laws reflect the relationship between goals, content, methods, and outcomes. Core principles include scientific rigor, systematicity, consciousness, and learner activity. Modern didactics is enhanced by digital technologies.

TOPIC 7. Competence-Based Approach and Outcome-Oriented Education
The competence-based approach aims to develop learners' ability to apply knowledge in practice. It integrates knowledge, skills, abilities, and values. In higher education, learning outcomes are described through specific competencies. This approach aligns with labor market requirements.

TOPIC 8. Features of Higher Education Pedagogy
Higher education pedagogy studies the laws of adult learning. Academic freedom and research activity are its defining characteristics. Students act as active subjects of the educational process. The learning process is organized based on the credit system.

TOPIC 9. Innovative Teaching Technologies
Innovative technologies include problem-based learning, project-based methods, case studies, and digital platforms. They develop students' critical thinking and research skills. Innovation is directly related to the teacher's professional competence. The key criterion of effectiveness is the quality of

learning outcomes.

TOPIC 10. Academic Integrity and Scientific Culture
Academic integrity is a fundamental condition for educational quality. It includes avoiding plagiarism, proper referencing, and adherence to scientific ethics. In higher education, scientific culture is closely connected with research activities. These principles comply with international standards.

TOPIC 11. Professional Competence of the Teacher
Teacher competence represents the unity of professional knowledge, methodological skills, and personal qualities. It includes communicative, research, and digital competencies. A higher education teacher performs academic supervision functions. Continuous professional development is a guarantee of quality education.

TOPIC 12. Digitalization of Education and Digital Pedagogy
Digitalization modernizes the content and methods of education. Online platforms and LMS systems increase learning flexibility. Digital pedagogy ensures interactivity and personalization. This process enhances learner autonomy.

TOPIC 13. Assessment and Monitoring of Education Quality
Assessment is a mechanism for identifying and adjusting learning outcomes. Formative and summative assessment types are used. Higher education applies a rating system and credit technology. Monitoring is aimed at managing educational quality.

TOPIC 14. Inclusive Education and Pedagogical Support
Inclusive education ensures equal access to learning for every student. It is based on the principles of individualization and adaptation. In higher education, support services are organized for students with special educational needs. This is closely related to the principle of social justice.

TOPIC 15. Educational Management and Leadership
Educational management focuses on strategic planning and quality assurance. Academic leadership plays a crucial role in implementing innovations. University autonomy increases management efficiency. The management process is regulated by legal and regulatory frameworks.

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Discipline Psychology of Higher Education

TOPIC 1. Subject, Object, and Objectives of Higher Education Psychology
Higher education psychology is a field that studies the patterns of personality development during the student age and psychological processes in the context of higher education. The object of study is the interaction between students and teachers. The subject includes mechanisms of professional formation, cognitive, motivational, and personal development. Its main objective is to enhance the psychological effectiveness of the educational process.

TOPIC 2. Psychological Characteristics of the Student Age
The student age is a period of professional and personal self-determination. During this time, reflection, life planning, and value orientations are formed. High intellectual potential, cognitive activity, and critical thinking are characteristic features. The range of social roles of the individual expands.

TOPIC 3. Psychological Issues of Adaptation to University Education
First-year students adapt to a new social environment, academic requirements, and independence. The adaptation process depends on emotional stability and motivation. Social support and advising systems facilitate adaptation. Successful adaptation positively influences academic achievement.

TOPIC 4. Learning Motivation and Its Structure
Learning motivation is a set of internal and external reasons that stimulate cognitive activity. Intrinsic motivation is associated with professional interest, while extrinsic motivation relates to assessment and social status. Theoretically, motivation is explained through humanistic and cognitive approaches. In higher education, special attention is paid to the development of professional-meaningful motivation.

TOPIC 5. Development of Cognitive Processes (Thinking, Memory, Attention)
The student period is marked by the development of abstract and logical thinking. Voluntary forms of memory and attention prevail. Analytical abilities develop through working with scientific texts. Mastery of cognitive strategies increases learning effectiveness. The development of critical and creative thinking is closely connected with scientific activity.

TOPIC 6. Professional Development of the Student's Personality
Professional development involves the formation of the future specialist's professional self-concept. Professional self-determination is the process of developing a conscious attitude toward one's future profession. Professional identity is an indicator of personal maturity. The university environment serves as the main space for professional socialization.

TOPIC 7. Psychology of Communication and the Academic Environment
Relationships between "teacher–student" and "student–student" are significant in higher education. Effective communication is based on trust and cooperation. Pedagogical tact and empathy influence the quality of the learning process. The psychological climate of the academic environment is a factor of personal development. Constructive conflict resolution reflects psychological culture.

TOPIC 8. Psychological Health of Students
Psychological health is characterized by emotional stability and life satisfaction. High academic workload may lead to stress and anxiety. Universities provide psychological services and preventive programs. The resource-based approach focuses on developing stress-management skills.

TOPIC 9. Self-Regulation, Reflection, and Academic Autonomy
Self-regulation is the student's ability to consciously plan and control learning activities. Reflection contributes to professional and personal growth. Metacognitive skills are prerequisites for academic success. Self-regulation includes planning, monitoring, and evaluating learning activities, as well as developing responsibility and autonomy. Time management is a key factor of academic success. Self-

control supports professional development.

TOPIC 10. Psychology of Abilities and Giftedness
Higher education aims to develop the potential of gifted and talented youth. Abilities are psychological conditions for successful performance of activities. A developmental environment stimulates creative thinking. Research activity is an important tool for identifying giftedness.

TOPIC 11. Psychological and Pedagogical Support in Higher Education
Psychological support is aimed at solving students' personal and academic problems. Continuity of counseling, coaching, and tutoring systems is essential. Supportive, preventive, and corrective services are organized.

TOPIC 12. Psychology of the Student Group: Socio-Psychological Climate and Group Dynamics
An academic group is a small social group characterized by group dynamics, leadership, and informal structures. A positive group climate increases learning motivation. Managing intra-group conflicts requires psychological literacy. The psychological climate of the student group affects learning effectiveness. Group norms and leadership structures shape interaction. An unfavorable climate may lead to conflicts.

TOPIC 13. Psychological Characteristics of the Teacher's Personality and Psychological Culture
A higher education teacher combines scientific and pedagogical roles. Professional identity and reflexivity are essential qualities. Teaching communication styles influence the educational process. Preventing professional burnout is an important task. The psychological culture of a teacher is the foundation of professional success and includes emotional intelligence, empathy, and reflection.

TOPIC 14. Psychological Characteristics of the Digital Learning Environment
In online learning, attention stability and motivation become critical issues. The phenomenon of digital fatigue and prevention of excessive immersion in virtual environments are considered. Virtual communication requires new psychological skills. Digital literacy is an essential competence of the modern student.

TOPIC 15. Psychology of Academic Adaptation, Stress, and Emotional Strain
First-year students adapt to a new social environment. Adaptation occurs at cognitive, emotional, and behavioral levels. Support programs help reduce stress and develop stress resilience. Successful adaptation improves academic performance. High academic workload may cause anxiety and emotional strain. Emotional stability is a condition for professional development. Self-regulation skills contribute to maintaining psychological health. The organization of psychological services at the university plays an important role.

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Discipline Organization and Planning of Scientific Research

TOPIC 1. Essence and Purpose of Scientific Research
Scientific research is a systematic process aimed at generating new knowledge and solving scientific problems. It ensures the integration of empirical data and logical analysis. The purpose of research is to clarify hypothetical questions and produce conclusions valuable to science and society. Research may have theoretical or practical significance. Clearly defined objectives determine the usefulness of results for the scientific community and society.

TOPIC 2. Selection of the Research Topic
Choosing a research topic is the first step that determines the effectiveness of the study. The topic should be relevant, scientifically significant, and feasible for investigation. A specific and well-defined topic ensures a structured research plan. The selected topic must be justified through literature review and preliminary data. Researcher interest in the topic contributes to the quality of the work.

TOPIC 3. Identification of Scientific Problems and Questions
A scientific problem is a set of specific questions addressed during the research process. It is defined in accordance with the research topic. Proper problem formulation enables the selection of hypotheses and research methods. The problem should be specific, measurable, and researchable. Its relevance is assessed based on scientific and practical significance.

TOPIC 3. Identification of Scientific Problems and Questions (Conceptual Aspect)
A scientific problem represents a set of conceptual questions forming the core of the research. Accurate problem definition is crucial for hypothesis formulation and method selection. The problem should take into account theoretical discourse and empirical gaps in the research field. Its relevance is based on scientific novelty, practical applicability, and academic discussion.

TOPIC 4. Formulation of Research Hypotheses
A hypothesis is a conceptual construct that reflects the expected outcome of the research. It must be testable, comparable, and verifiable. The hypothesis determines the research logic, methodological design, and data analysis strategy. A well-formulated hypothesis increases the reliability and objectivity of research results.

TOPIC 5. Selection of Research Methods
Research methods are tools for collecting and analyzing empirical data. They should correspond to the hypothesis, topic, and objectives of the research. Integrating quantitative and qualitative methods allows for deeper understanding of complex phenomena. Method selection ensures reliability, accuracy, and replicability of the study. Methodological consistency enhances acceptance of scientific findings.

TOPIC 6. Development of the Research Plan
The research plan is a structured document integrating conceptual, methodological, and logistical components. It defines research stages, data collection tools, timeframes, and resources. Planning ensures methodological stability, process management, and reliability of results. The plan reflects the

interconnection between conceptual, empirical, and analytical stages.

TOPIC 7. Data Collection Methods
Data collection is the core process for testing research hypotheses. It is conducted through observation, experimentation, surveys, interviews, and analysis of archival materials. Data quality determines the reliability and accuracy of the research. Collected data must align with the conceptual model and theoretical framework. Ethical and legal standards must be strictly observed during data collection.

TOPIC 8. Data Processing and Analysis
Data analysis aims to substantiate scientific conclusions. Quantitative data are processed using statistical models and multivariate analysis, while qualitative data are analyzed through content, discourse, or phenomenological analysis. Analysis should correspond to research hypotheses and objectives. Data interpretation enhances the credibility of scientific conclusions.

TOPIC 9. Ethical Issues
Ethics is a crucial aspect of scientific research. The rights of research participants must be protected. Adherence to ethical standards helps avoid falsification and manipulation of results. Researchers must follow ethical principles at all stages of the research process. Ethical conduct ensures trust and credibility within the scientific community.

TOPIC 10. Evaluation of Research Results
Evaluation of results determines the theoretical, methodological, and practical significance of the research. It assesses the reliability, accuracy, and validity of findings. Evaluation demonstrates the correctness of hypotheses, achievement of objectives, and level of scientific novelty. It ensures readiness of the research for publication.

TOPIC 11. Drawing Conclusions
Conclusions represent an integrative summary of all research stages. They reflect confirmation or refutation of hypotheses, achievement of objectives, and theoretical and practical significance of results. Conclusions should include clearly formulated statements and recommendations demonstrating scientific novelty. Logical structure and evidence-based reasoning enhance credibility.

TOPIC 12. Ensuring Research Quality
Research quality is a criterion for objectivity and reliability of results. It is achieved through proper planning, method selection, and data analysis. High-quality research promotes recognition of scientific novelty and participation in academic discourse. Researchers must maintain methodological consistency and ethical standards.

TOPIC 13. Effective Time Management
Time management is a key strategic element in organizing scientific research. Adhering to planned timelines improves research quality. Effective use of time facilitates resource coordination and ensures timely achievement of results.

TOPIC 14. Resource Organization
Research resources include human, material, technical, and financial components. Proper organization of resources facilitates the research process. Efficient resource allocation ensures accomplishment of planned tasks. Resources must correspond to the research design and methodological strategy. Effective management enhances research efficiency.

TOPIC 15. Publication of Research Findings
Publication of research results is a key stage in knowledge dissemination and academic communication. It is carried out through scientific articles, presentations, conferences, and databases. Publication enhances the researcher’s academic reputation and promotes recognition of scientific novelty. Published research serves as a source of information for practice and scholarly discussion.

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SCIENTIFIC STRATEGY FOR ESSAY WRITING:

Analytical depth: When addressing a topic, it is essential not only to describe the problem but also to propose possible solutions (pedagogical models or psychological mechanisms).

Identification of contradictions: It is important to highlight existing contradictions and present the scientific framework of the essay (relevance, objective, hypothesis).

Essay Requirements:

1. **Introduction:**

Justification of the relevance of the problem and formulation of the thesis.

2. **Main Body:**

At least 2–3 arguments supported by scientific theories (e.g., Lev Vygotsky, Jean Piaget, or contemporary scholars).

3. **Conclusion:**

Formulation of the author’s own research position.