

APPROVED

**at the meeting of the Academic Council
NAO «KazNU named after al-Farabi».
Protocol no. ____ from _____ y.**

**Entrance examination program
for applicants to doctoral studies
for a group of educational programs
D151 – Nursing Science**

1. General provisions.

1.1 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). and in accordance with Order No. 554 dated November 5, 2021 "On Amendments to the Order of the Minister of Education and Science of the Republic of Kazakhstan", with amendments to the wording of the Order of the Minister of Science and Higher Education of the Republic of Kazakhstan dated 05/03/2024 No. 212.

1.2 Applicants for doctoral studies take an exam in the profile of a group of educational programs. Exam questions are divided into 3 blocks: block 1 - questions on the discipline "Public Health", block 2 - on the discipline "Project Management in Nursing", block 3 - on the discipline "Fundamentals of Evidence-Based Medicine in Nursing".

Blocks	Score
Blok 1	30
Blok 2	30
Blok 3	40
Maximum score	100/75

1.3 The duration of the entrance exam is 4 hours.

**2. Topics for preparing for the exam
on the profile of the group of the educational program.**

**Blok 1
Discipline "Public Healthcare"**

Topic 1. The subject of public health. History of development, methods, main sections. Definition of public health and healthcare, components of health, determinants of public health, levels of health.

Topic 2. Social conditioning of health. Factors affecting health

Topic 3. Methods for calculating demographic indicators and migration indicators. Methods for calculating vital statistics.

Topic 4. Women's health and organization of obstetric and gynecological care.

Topic 5. Quality of life. Morbidity indicators, main criteria; The place and role of nursing personnel in the healthcare system. The concept of quality of medical care. Basic principles of state policy in the field of protecting the health of citizens.

Topic 6. Medical and social aspects of the morbidity of the population with socially significant diseases.

Topic 7. Healthcare management. Management principles, management as a process, management cycle. Rights of citizens to medical care (Constitution of the Republic of Kazakhstan, Code of the Republic of Kazakhstan “On the health of the people and the healthcare system.” Management of human resources in healthcare.

Topic 8. Prevention as one of the basic principles of healthcare organization.

Topic 9. Prerequisites for reforming the healthcare system in the Republic of Kazakhstan. Economic essence and stages of implementation of the Unified National Health Service. The main directions of reforming the healthcare system in the Republic of Kazakhstan.

Topic 10. Disability, physical development of the population. Methodology for calculating and analyzing disability indicators. Aging, disabled and economically disadvantaged populations.

Topic 11. Innovative technologies in healthcare. Hospital-replacing technologies.

Topic 12. Lifestyle and medical and social aspects of the most important diseases. Medical and social problems of developing a healthy lifestyle.

Topic 13. Risk factors for developing diseases. Risk factors using the example of non-communicable diseases.

Topic 14. Organization of hospital care.

Topic 15. Standardization in healthcare. Principles of quality management of medical care in healthcare. Accreditation of medical organizations: purpose, objectives and principles.

List of Literature.

1. Public healthcare: textbook //A.A. Akanov, K.A. Tulebayev, M.A. Kamaliyev etc. – M: Moscow: Literra, 2017.
2. Lisicin Y.P. Public health and healthcare: [Text]; Textbook / Y.P. Lisicin, G.E. Ulumbekova. – 3rd ed., adap. and added. – M: GEOTAR-Media, 2015.

3. V.A. Medik, V.K. Yriev. Public health and healthcare. 33rd ed., adap. and added Textbook – GEOTAR-Media-2014.
4. Public health and healthcare, healthcare economics [Text]; Textbook V1 /Red. Kucherenko V.Z. – M.: GEOTAR-Media -2013.
5. Public health and healthcare: practice guide: study guide / V.A. Medik, V.I. Lisicin, M.S. Tokmachev. – 2nd ed., adap. and added. – M.: GEOTAR-Media, 2018.
6. Law of the Republic of Kazakhstan No. 405 On Compulsory Social Health Insurance (with amendments and additions as of 01/01/2020)
7. On approval of the Rules for organizing screening Order of the Minister of Health of the Republic of Kazakhstan dated September 9, 2010 No. 704. Registered with the Ministry of Justice of the Republic of Kazakhstan on September 15, 2010 No. 6490.

Blok 2

Discipline «Project management in nursing»

Topic 1. Fundamentals of project management in a medical organization, basic concepts of project management, the structure of project management in nursing;

Topic 2. Classification of categories of projects and multi-project programs. Life cycles of high-tech projects. The step-by-step gateway process of the life cycle of creating a new product in nursing; The project environment.

Topic 3. Project lifecycle and risk management. A triad of project management concepts. Predictive planning and control. Responsibility centers, project team.

Topic 4. The importance of effective project management. Classification of projects. Strategic management of project portfolios. The project registry.

Topic 5. Improving project management capabilities in the company: project portfolios, cost and ROI of project management, Berkeley project management maturity models, PMI program. Approaches to improving project management processes and its lifecycle.

Topic 6. Functional managers and leaders of the project, work packages. Choosing a project manager. Career development in project management.

Topic 7. The method of the "pilot" project, reengineering of integrated processes. Roles in project management in nursing; Key positions with integrating responsibilities, responsibilities and powers.

Topic 8. Variants of organizational structures: functional and project matrix structure, project task force. The basic principle of accountability.

Topic 9. The responsibility matrix. Responsibilities of the Project Portfolio Management group. Selection of projects in the following categories: communication systems, information systems, new products and services, R&D. Managing project priorities in nursing.

Topic 10. Ethical foundations of scientific activity. Plagiarism. Responsibility for non-compliance with ethical principles.

Topic 11. Search for sources of funding for research projects. International scientific foundations, the main goals and objectives of the foundations, the basic principles of functioning, priority areas of activity.

Topic 12. Functions of the project office. Responsibilities of office employees: project manager, functional project leader, project engineer, contract administrator, project controller, project accountant, production coordinator, implementation manager.

Topic 13. The concept of the project team and its development, effective work, conflicts and their resolution. Distribution and commitment.

Topic 14. Management of project stakeholders; personnel management in projects.

Topic 15. Mechanisms for the implementation of the results of scientific research. Commercialization of scientific results. Protection of intellectual property. International patenting. Discoveries, inventions, innovation proposals. Copyright certificates. License.

List of sources used:

Main:

1. Vikhansky O.S., Naumov A.I. Management: Textbook. – 5th ed.-M.: Master: INFRA-M, 2014. – 576 p.
2. Griffin R.U. Management: - 12 basylm. Almaty: "Ulttyk audarma bureaucrats". 2018. – 768 b.
3. Daft R. Management. 8th ed./translated from English by S.K.Mordovin.- St. Petersburg: Peter, 2014. - 800 p.
4. A guied to the project management body of knowledge. PM Network., PMI., 2013.
5. I.I. Mazur, V.D. Shapiro, N.G. Olderogge, Project management., - M.: Omega – L., 2010.
6. Afanasyev V. V., Gribkova O. V., Ukolova L. I. Methodology and methods of scientific research. — M.: Yurayt. 2023. 164 p.
7. Bayborodova L. V., Chernyavskaya A. P. Methodology and methods of scientific research. — M.: Yurayt. 2024. 222 p.

Additional information:

1. Drucker P., Maciarello J.A. Management: trans. from English – M.: OOD "I.D. Williams", 2012. - 704 p.
2. Mescon M., Albert M., Khedouri F. Fundamentals of management. – M.: Williams Publishing House", 2016, 2017, 2019. - 672 C. (updated editions of textbooks).
3. McCormack, J., Slaght, J. (2005). English for academic study: Extended writing and research skills. Garnet education: The university of reading.

4. Skvortsova L. N. Fundamentals of scientific research. Textbook for universities. — M.: Lan. 2023. 100 p.
5. Sladkova O. B. Fundamentals of scientific research. - M.: Yurayt. 2023. 155 p.

Blok 3

Discipline «Fundamentals of evidence-based medicine in nursing»

Topic 1. Introduction to Evidence-based Medicine (DM). The history of evidence-based medicine. Global development experience.

Topic 2. Types of research. Observational: descriptive, analytical. Planning of observational studies. Methods of qualitative and quantitative research in evidence-based medicine.

Topic 3. Clinical epidemiology: definition, history of development, basic principles and research methods. Formulation of a clinical problem using the PICO principle. Converting a clinical problem into a PICO question.

Topic 4. Scientifically proven databases. Primary, secondary, and tertiary literature. Search operators. Index of medical subject headings

Topic 5. Evidence-based medicine in clinical practice in the CIS countries and Kazakhstan. Evidence-based medicine databases, the Cochrane Library.

Topic 6. Evidence-based nursing care. Health care performance indicators are sensitive to the quality of nursing care.

Topic 7. Introduction to Evidence-based Medicine (DM). The history of evidence-based medicine. Global development experience.

Topic 8. Evidence-based medicine in clinical practice in the CIS countries and Kazakhstan. Evidence-based medicine databases, the Cochrane Library. Scientifically proven databases. Primary, secondary, and tertiary literature. Search operators. Index of medical subject headings.

Topic 9. Types of research. Observational: descriptive, analytical. Planning of observational studies. Methods of qualitative and quantitative research in evidence-based medicine.

Topic 10. Types of research. Experimental: RCTs. Planning of experimental studies. Problem formulation in nursing.

Topic 11. Systematic reviews and meta-analysis. Search for information in the Cochrane Database of Systematic Reviews electronic database.

Topic 12. The hierarchy of research in evidence-based medicine. Levels of evidence. Analysis of a scientifically proven article (meta-analysis).

Topic 13. Search for information on the Internet and an electronic database. Bibliographic search system for medical information: Cochrane Library.

Topic 14. Clinical audit. Report. Approximate planning and conducting of a clinical audit. "Centers of evidence-based medicine in the world and the Republic of Kazakhstan".

Topic 15. Clinical Practice Guidelines (CRC). Principles of development and implementation in practice. Search in the scientifically proven CRC database. Clinical practical guidelines. Advantages and disadvantages.

Topic 16. Types of decision-making in nursing practice. The relationship of DM with clinical epidemiology and biomedical statistics. Obstacles to the advancement of evidence-based nursing practice.

List of Literature.

Main:

1. Osnovy dokazatelnoy meditsiny / T. Grinkhalkh; per. s angl. pod red. V. V. Vlasova. 5-e izd., pererab. i dop. M.: GEOTAR-Media, 2022.
2. Daleldi medicina negizderi. T. Grinkhalkh. Aud.agylshyn tili. / zhau.red. G.S. Kemelova, T.K.Sagadatova, GEOTAR-Media, 2018.
3. Epidemiology and research methods. M.K.Saparbekov, Almaty, 2016.
 4. Kameshwar Prasad. Fundamentals of Evidence Based Medicine, Springer, 2nd ed. 2014, English, 174 pages,
 5. Sharon E. Straus, Paul Glasziou, W. Scott Richardson, R. Brian Haynes.-Evidence-Based Medicine, How to Practice and Teach EBM, 5th Edition, 2018, English, ISBN: 9780702062964, 336 P.

Additional:

1. Kaliyeva Sh.S., Minakova N.A. Information and didactic block on the basics of evidence-based medicine. study guide. - Karaganda: PH «Aknur», 2019.
2. Oshibayev A.Ye. EBM basics: study guide. - Almaty: «Kazakh Universiteti», 2018.
3. Raushanova A.M. EBM basics: study guide. - Almaty: « Kazakh Universiteti », 2019.

Assessment criteria for the entrance exam for applicants to the doctoral program in the specialty 8D101 "Nursing"

Characteristics of the work	Rating score range	ECTS Assessment	Traditional (4-level) assessment scale
The applicant's response is rated "excellent" when the applicant demonstrates a complete understanding of the main directions of scientific research of various processes and objects, technology of professional and scientific activities in the field of public health; He is able to express his thoughts clearly, clearly and logically in writing and oral speech; be able to apply the acquired knowledge to solving practical problems; is able to reason and draw logical conclusions.	95-100	A	Excellent
	90-94	A-	
The applicant's response is rated "good" when the applicant demonstrates an understanding of the main directions of scientific research of various processes and objects, technology of professional and scientific	85-89	B+	Good
	80-84	B	
	75-79	B-	

Characteristics of the work	Rating score range	ECTS Assessment	Traditional (4-level) assessment scale
<p>activities in the field of public health; He is able to express his thoughts clearly, clearly and logically in writing and oral speech; be able to apply</p>			
<p>The applicant's response is rated "satisfactory" when the response indicates a limited understanding of the main directions of scientific research of various processes and objects, technology of professional and scientific activities in the field of public health; Does not know how to express his thoughts clearly, clearly and logically in writing and oral speech; is able to apply the knowledge gained to solving practical problems; is able to reason and draw logical conclusions.</p>	70-74	C+	Satisfactory
	65-69	C	
	60-64	C-	
<p>The applicant's answer is rated "satisfactory" when the answer indicates a very limited understanding of the main directions of scientific research of various processes and objects, technology of professional and scientific activities in the field of public health; Does not know how to express his thoughts clearly, clearly and logically in writing and oral speech; does not know how to apply the knowledge gained to solving practical problems; does not reason well and makes questionable logical conclusions.</p>	55-59	D+	Satisfactory
	50-54	D	
<p>The applicant's answer is assessed as "not satisfactory" when the answer indicates a complete lack of understanding of the main directions of scientific research of various processes and objects, technology of professional and scientific activities in the field of public health. Does not know how to express his thoughts clearly, clearly and logically in writing and oral speech; does not know how to apply the knowledge gained to solving practical problems; does not know how to reason and draw logical conclusions.</p>	0-49	F	Unsatisfactory